

# TIIG Cumbria Themed Report

Road Traffic Collisions across Cumbria  
(2011/12 to 2013/14)

February 2015

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## FOREWORD

About 250 Cumbria residents are killed or seriously injured on our roads each year. Our rate of road injuries and deaths is significantly higher than the national average, with the district of Eden having the highest rate in the county. Transport accidents are a major contributor to avoidable deaths, and many of those who die on our roads are young, often inexperienced, drivers.

The data and analysis in this report, taken alongside other sources, reflects the burden of road traffic accidents on the three hospitals in Cumbria which provide accident and emergency services. Around 2,000 Cumbrians attend these services each year, about one in ten of whom are admitted to hospital.

Accident and emergency attendance data have the advantage of being relatively accessible for analysis. Information on attendance is also more timely than mortality data; and this report suggests that there has been a recent reduction in road traffic related attendances, a trend that we hope to see reflected in road death statistics when these become available.

Finally, this report provides valuable information to help focus multiagency efforts, led by the Cumbria Road Safety Partnership, to further reduce transport related injuries and deaths across the County. With the forthcoming in depth audit of deaths on the road in Cumbria, also being produced by Liverpool John Moores University's Centre for Public Health, this report is a clear illustration of the value of public health intelligence in informing local prevention strategies.

Dr Jane Mathieson  
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## ACKNOWLEDGEMENTS

With thanks to the emergency departments involved with the collection of the data used in this report and to the North West Ambulance Service for providing ambulance call out data. Thank you also to Cumbria County Council Public Health Team for their continued involvement in the Trauma and Injury Intelligence Group and to Dr Jane Mathieson for writing the foreword for this report. Finally, thank you to Petra Collins, Jane Harris and Bella Szarowicz at the Centre for Public Health for their assistance in proof reading this report.

## SUMMARY OF DATA

- Public Health England's (PHE) Public Health Outcomes Framework (PHOF) indicator reported Cumbria to have a rate of 46 per 100,000 resident population killed or seriously injured on England's roads in 2011-13; this was significantly worse when compared to the rate of 40 per 100,000 population across England (PHE, 2014b).
- There were 6,966 attendances to the emergency departments (EDs) across Cumbria due to injuries caused by a road traffic collision (RTC) between April 2011 and March 2014; of which, 87% were residents of Cumbria. Across the three years there has been a 16% reduction in the number of RTC-related injury attendances to the EDs across Cumbria.
- Between 2011/12 and 2013/14 there were 3,985 ambulance call outs across Cumbria for traffic/transportation accidents, which reduced by 16% across the three-year period.
- There were more males than females attending an ED with RTC-related injuries (males: all attendances = 57%; Cumbria residents = 56%).
- Patients aged between 15 and 29 years (all residents = 41%; Cumbria residents = 42%) and between 30 and 59 years (all attendances = 40%; Cumbria residents = 39%) accounted for the highest proportions of RTC attendances.
- Looking at five-year age groups for Cumbria residents only, 20-24 year olds made up the largest proportion of attendances (17%), followed by those aged between 15 and 19 years (14%) and between 25 and 29 years (11%). Overall, young people aged between 15 and 29 years accounted for over two in five (42%) ED attendances.
- Where recorded, the majority (95%) of RTC attendees were White British, which is in line with the ~95% White British population of Cumbria. However, it should be noted that nearly three in ten (27%) records did not have an ethnicity recorded.
- RTC-related ED attendances peaked in November 2012 (8.87 per day), August 2011 (8.06 per day), and December 2011 (8.03 per day). Ambulance call outs for traffic/transportation remained fairly stable over the three years, with the overall number reducing year on year, though call outs peaked in November 2012 (4.53 per day).
- The day of the week with the highest number of RTC ED attendances was Friday (16%). Likewise, the highest proportion of ambulance call outs for traffic/transportation accidents was also Friday (17%).
- ED attendances peaked between 16:00 and 17:59 (17%) and ambulance call outs peaked between 14:00 and 15:59 and between 16:00 and 17:59 (16% each).
- The majority of ED attendees were discharged with no follow-up treatment required (all attendances = 70%; Cumbria residents = 71%). Just over one in ten patients were discharged with follow-up treatment to be provided by their general practitioner (all attendances and Cumbria residents = 11% each), and under one in ten were admitted to hospital (all attendances = 9%; Cumbria residents = 8%). Between 2011/12 and 2013/14 there were 11 patients, all residents of Cumbria, who died in the department due to injuries sustained by a RTC.

- Over three in five (62%) ambulance call outs for traffic/transportation accidents resulted in the patient being transferred to an ED. Of which, 43% were taken to Cumberland Infirmary, 24% to West Cumberland Hospital, 17% to Furness General Hospital and 14% to Royal Lancaster Infirmary in north Lancashire.
- Over a quarter (26%) of Cumbria residents attending an ED in the county for RTC-related injuries were from Carlisle local authority. Twenty-four per cent were from Copeland, 21% from Allerdale and 19% from Barrow-in-Furness local authorities. Residents from Eden and South Lakeland local authorities made up 5% each; however, many residents from the South East of the county are likely to attend Royal Lancaster Infirmary for emergency treatment.
- The crude rate of Cumbria residents attending an ED between 2011/12 and 2013/14 with RTC-related injuries was 1,211 per 100,000 resident population. Rates were significantly higher than this in Allerdale, Barrow-in-Furness, Carlisle and Copeland local authorities, while rates were significantly lower in Eden and South Lakeland.
- Ambulance call outs for traffic/transportation accidents were highest in South Lakeland (26%) and Carlisle (21%) local authorities.

#### SUMMARY OF DATA BY LOCAL AUTHORITY

- **Allerdale:** there were 1,274 RTC-related injury attendances; a crude rate of 1,323 per 100,000 resident population. Fifty-five per cent were male; 41% were aged between 15 and 29 years and 40% aged between 30 and 59 years.
- **Barrow-in-Furness:** there were 1,168 ED attendances; a crude rate of 1,706 per 100,000 population. Males accounted for 53%; 42% were aged between 15 and 29 years and 39% aged between 30 and 59 years.
- **Carlisle:** there were 1,573 RTC attendances; a crude rate of 1,457 per 100,000 population. Fifty-eight per cent were male; 44% were aged between 15 and 29 years and 38% aged between 30 and 59 years.
- **Copeland:** there were 1,422 ED attendances; a crude rate of 2,022 per 100,000 population. Males accounted for 55% of attendances; 43% were aged between 15 and 29 years and 40% aged between 30 and 59 years.
- **Eden:** there were 281 RTC-related attendances; a crude rate of 534 per 100,000 population. Fifty-nine per cent were male; 43% were aged between 15 and 29 years and 35% between 30 and 59 years.
- **South Lakeland:** there were 324 ED attendances; a crude rate of 313 per 100,000 population. Males accounted for 56% of attendances; 43% were aged between 15 and 29 years and 39% aged between 30 and 59 years.



- The majority of figures reported nationally on RTCs use data collected by the STATS19 system which are reported to by the police. RTCs not reported to the police are unlikely to be included in these figures; therefore STATS19 does not hold a complete record of all RTC-related injuries.
- There are disparities between figures published by PHE and the TIIG data presented in this report; the PHOF reported Allerdale, Eden and South Lakeland local authorities to have crude rates of people killed or seriously injured significantly higher than the average for Cumbria, whereas TIIG data on RTC injury attendances show Eden and South Lakeland as significantly lower. These differences are largely due to differences in the data collected, TIIG data includes all injury attendances to the ED while the PHOF only looks at those killed or seriously injured which are reported to STATS19.
- The Trauma and Injury Intelligence Group (TIIG) data request service currently is not being utilised by local organisations in Cumbria. ED data collated by TIIG allows for a comprehensive understanding on the burden of RTC-related injuries which are not available through STATS19 and not reported by the Department for Transport or included in the PHOF indicator, *Killed and seriously injured casualties on England's roads*.

1. In order to have a comprehensive understanding of the burden of RTCs on health services and to inform policy, local partners should use all available resources and be encouraged to access Trauma and Injury Intelligence Group (TIIG) data and the TIIG data request service. STATS19 data, used by the Department for Transport (DfT) and Public Health England (PHE), are unlikely to include incidents not reported to the police; therefore supplementary emergency department (ED) data would increase the identification of key patterns and trends specific to local areas, thus allowing the effective targeting of intervention activities.
2. The Cumbria Road Safety Partnership (CRSP) should continue to raise awareness of the work they do and the resources which are available to local partners and the public in order to continue its contribution in reducing the number of injuries and deaths which occur on the county's road in the years ahead. Exploration of the CRSP's contribution to the reduction in RTC-related attendances, with a specific focus on key areas such as impact on males, specific age groups, and rural areas, is recommended. Though the burden of RTCs have decreased overall, it may not have decreased across all key areas, therefore this evidence could be used to further inform their strategies which are linked to these key areas.
3. Local partners need to ensure policies and interventions address road safety amongst young people aged between 15 and 29 years. The CRSP should continue to provide a program of road safety activities aimed at young people with an emphasis on interactive approaches such as the media workshops. If an evaluation of this campaign shows that it was effective, it is recommended for this work to be repeated.
4. RTCs are more prevalent in rural areas where car ownership is high and driving conditions can be demanding when compared to urban roads (Neary et al., 2011). Fosdick (2013) reported young rural drivers nearly twice (44%) as likely to be involved in a RTC which resulted in injury compared to young urban drivers. Consequently, road safety needs to address the geographical differences across the local authority districts through the way services are designed and delivered, acknowledging the variances in the road network between urban and rural areas. Although data collected by the EDs in Cumbria currently do not capture details of the incident location, datasets should be reviewed in order to allow specific locations to be recorded. This can then determine rural areas where RTCs are particularly prevalent so that traffic calming measures (e.g. speed restrictions) can be implemented.
5. A key theme of the UK Government's *Strategic Framework for Road Safety* is the empowerment of local citizens and local service providers, assisted by the decentralisation of funding (Department for Transport, 2011). This allows for local and community decision making, flexibility and innovation through working with local service providers on enforcement, traffic management and speed limits. Local organisations across Cumbria should therefore ensure local communities are involved in road safety.



## WHAT IS THE POPULATION OVERVIEW?

Cumbria is the second largest county in England. However, with a population of just under 500,000 people (Office for National Statistics, 2013) it is the second least densely populated county. The county is a two tier local authority area, thus Cumbria County Council has a statutory responsibility for the Highways and Fire and Rescue Service. Cumbria is made up of six local authority districts; Allerdale, Barrow-in-Furness, Carlisle, Copeland, Eden and South Lakeland. The largest urban areas are Barrow-in-Furness and Carlisle, while much of the rural communities spread across the rest of the county carry unique challenges for local organisations in the way services are designed and delivered.

According to Public Health England (PHE, 2014a) the health of people in Cumbria is varied compared with the England average, with considerable inequalities in health. There is a social gradient in road traffic accidents in children and in men aged between 20 and 64 years, with higher mortality rates in lower socioeconomic groups (PHE, 2014b).

PHE's Public Health Outcomes Framework (PHOF) indicator reported a rate of 46 per 100,000 resident population killed or seriously injured casualties on England's roads across Cumbria in 2011-13 (n=684; PHE, 2014b)<sup>A</sup>. This is significantly higher than the rate of 40 per 100,000 population across England (n=63,734). Rates were significantly higher than the England average in half of the districts in the county; Allerdale, Eden and South Lakeland<sup>B</sup>.

In 2013 there were 183,670 casualties in Great Britain as a result of a road traffic collision (RTC), of which 1,713 were killed (Department for Transport, 2014). Although these figures have decreased by 6% and 2% respectively from the previous year (Department for Transport, 2014), RTCs remain a major cause of preventable deaths and morbidity (PHE, 2014b).

## NUMBER OF EMERGENCY DEPARTMENT INJURY ATTENDANCES DUE TO ROAD TRAFFIC COLLISIONS

Data collated by the Trauma and Injury Intelligence Group (TIIG)<sup>C</sup> shows there were 6,966 attendances to the emergency departments (EDs) across Cumbria due to injuries sustained by road traffic collisions (RTCs) between April 2011 and March 2014. Of these, 6,042 were residents of Cumbria (87%).

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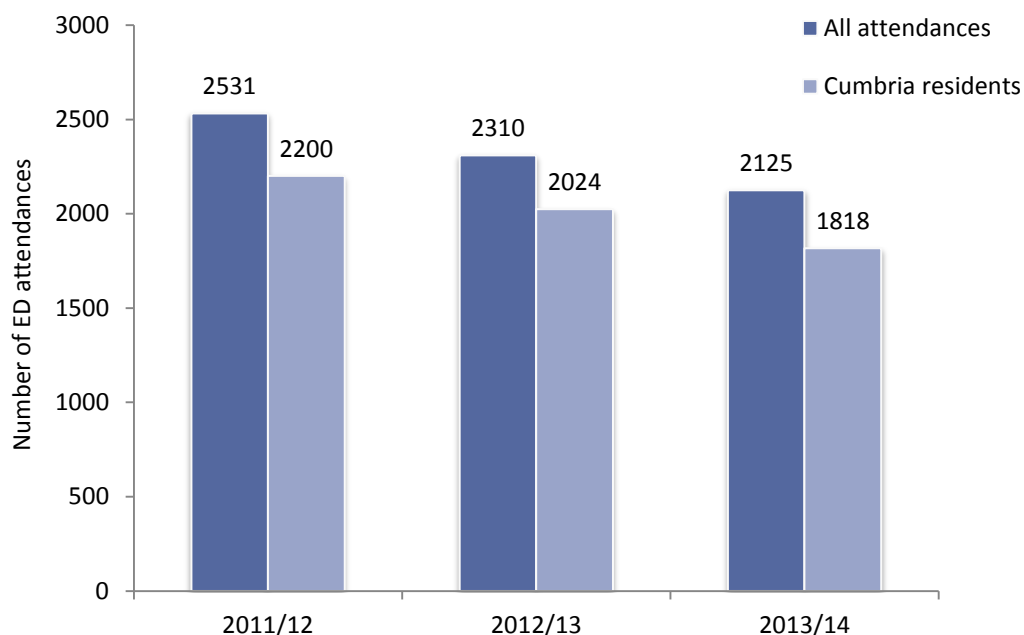
<sup>A</sup> This is based on statistics published by the Department for Transport, using data reported to the police via the STATS19 system. For more information on the Public Health Outcomes Framework, please visit: [Public Health Outcomes Framework](#).

<sup>B</sup> See Appendix A for a full list of the crude rates and confidence intervals.

<sup>C</sup> See Appendix B for the methods used in reporting TIIG data.

In 2011/12 there were 2,531 RTC attendances, which decreased by 9% in 2012/13 (n=2,310) and decreased a further 8% in 2013/14 (n=2,125). Overall, across the three years there has been a 16% reduction in ED attendances due to RTCs (Figure 1).

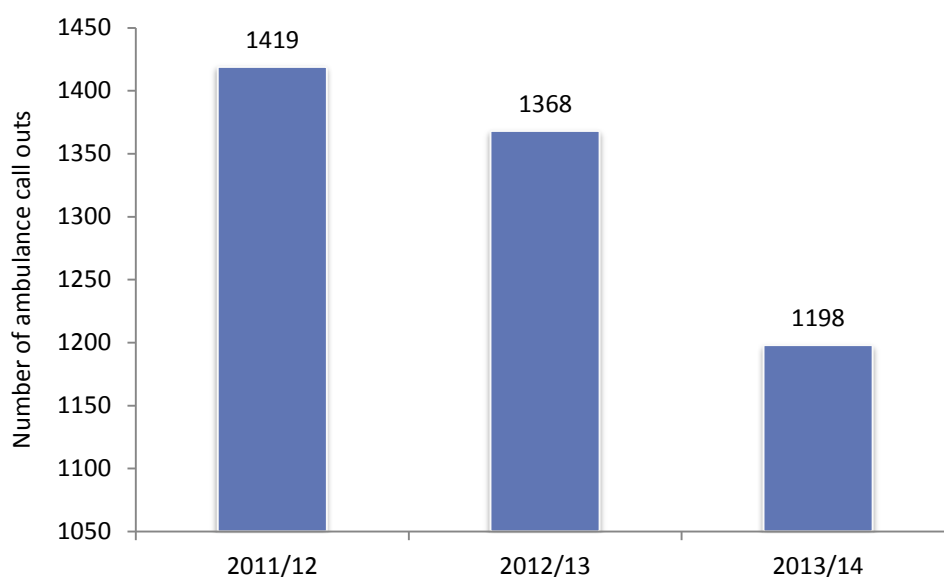
**Figure 1: ED attendances for RTC injuries by year of attendance, 2011/12 to 2013/14**



#### NUMBER OF AMBULANCE CALL OUTS FOR TRAFFIC/TRANSPORTATION ACCIDENTS

Between 2011/12 and 2013/14, there were a total of 3,985 ambulance call outs across Cumbria for traffic/transportation accidents. In 2011/12 there were 1,419 call outs which decreased by 4% in 2012/13 (n=1,368) and decreased a further 12% in 2013/14 (n=1,198). Over the three-year period there was an overall 16% reduction in ambulance call outs for traffic/transportation accidents (Figure 2).

**Figure 2: Ambulance call outs for traffic/transportation accidents by year of attendance, 2011/12 to 2013/14**



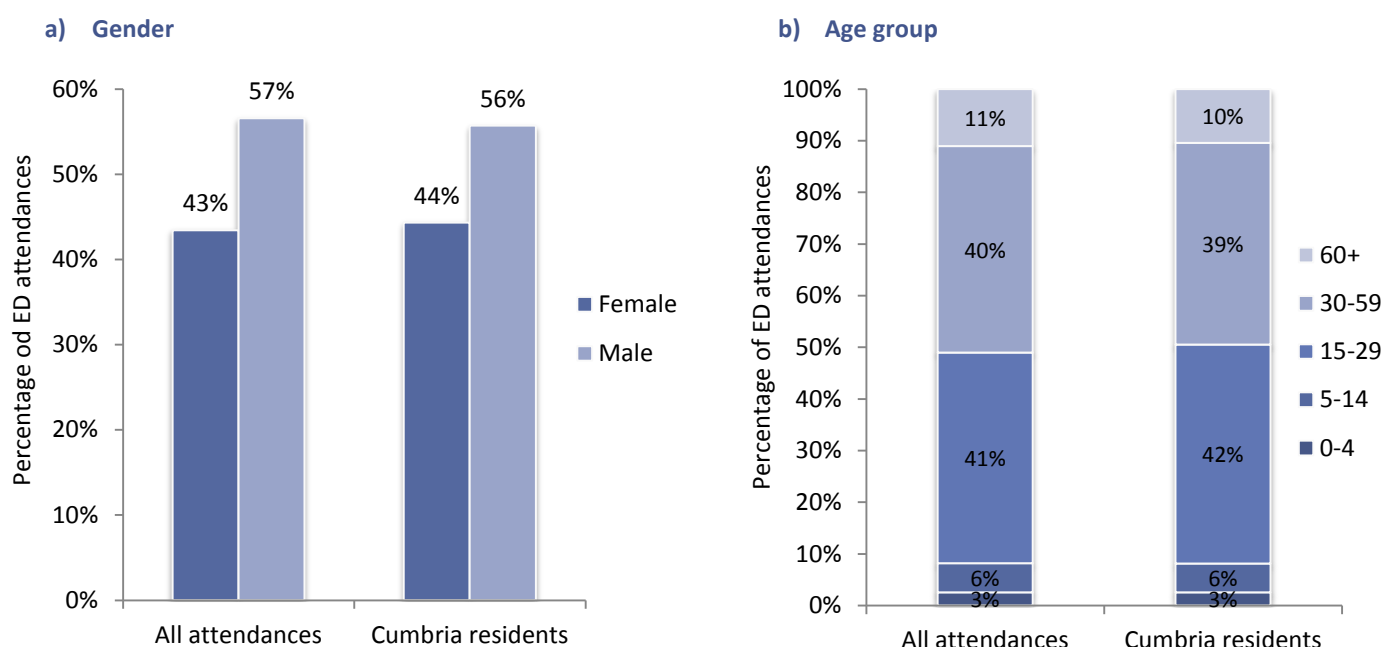
## WHO IS AT RISK AND WHY?

This section of the report looks at patient demographics of RTC injury attendances between 2011/12 and 2013/14. RTCs are reported to be the leading cause of death in young people aged between 15 and 29 years (World Health Organization, 2013); This age group will be examined in more detail in order to better understand why they face a greater risk of being involved in RTCs. Additionally, those living in rural areas are also at greater risk of accidents, and this will be looked at in *Geographical differences in need*.

### DEMOGRAPHICS OF EMERGENCY DEPARTMENT ATTENDEES

The gender and age groups of patients attending an ED in Cumbria with injuries sustained from RTCs are presented in Figure 3. In the three-year period there were more males than females who attended an ED with RTC-related injuries (males: all attendances = 3,941; 57%; Cumbria residents = 3,365; 56%; Figure 3a). Attendees aged between 15 and 29 years and between 30 and 59 years accounted for the highest proportions of RTC injury attendances (Figure 3b).

**Figure 3: ED attendances for RTC injuries by gender and age group, 2011/12 to 2013/14<sup>D</sup>**



<sup>D</sup> All attendances = 6,966; Cumbria residents = 6,042.

Table 1 presents a breakdown of Cumbria residents attending an ED for RTC-related injuries during the last three years by gender and by five-year age groups. The largest proportion of Cumbria residents who attended an ED due to a RTC were 20-24 year olds (17%), followed by those aged between 15 and 19 years (14%) and between 25 and 29 years (11%). Overall, young people aged between 15 and 29 years accounted for over two in five (42%) ED attendances (n=2,560).

There were similar proportions across both gender categories and more males than females across the majority of five-year age groups, although there were more females than males in some of the younger age groups (0-4 and 10-14 years). Males aged between 20 and 24 years accounted for the largest number of RTC attendances made by Cumbria residents (n=587), followed by males aged between 15 and 19 years (n=480) and 20-24 year old females (n=450).

**Table 1: ED attendances for RTC injuries by gender and five-year age groups (Cumbria residents), 2011/12 to 2013/14<sup>E</sup>**

Age group	Female		Male		Total	
	n	%	n	%	n	%
0-4	84	3%	69	2%	153	3%
5-9	68	3%	84	2%	152	3%
10-14	95	4%	92	3%	187	3%
15-19	391	15%	480	14%	871	14%
20-24	450	17%	587	17%	1037	17%
25-29	306	11%	346	10%	652	11%
30-34	209	8%	310	9%	519	9%
35-39	169	6%	245	7%	414	7%
40-44	178	7%	257	8%	435	7%
45-49	185	7%	240	7%	425	7%
50-54	139	5%	203	6%	342	6%
55-59	105	4%	121	4%	226	4%
60-64	82	3%	99	3%	181	3%
65-69	70	3%	73	2%	143	2%
70-74	40	1%	49	1%	89	1%
75+	106	4%	110	3%	216	4%
<b>Total</b>	<b>2677</b>	<b>100%</b>	<b>3365</b>	<b>100%</b>	<b>6042</b>	<b>100%</b>

<sup>E</sup> Percentages may not add up to 100% due to rounding.

The ethnicities of RTC attendances are shown in Table 2. Notably, there were 1,905 records without an ethnicity recorded which equates to nearly three in ten (27%) attendances<sup>F</sup>. Of the 5,061 records with an ethnicity recorded, the majority (95%) were White British. This figure is in line with the ~95% White British population of Cumbria.

**Table 2: ED attendances for RTC injuries by ethnic group (all attendances), 2011/12 to 2013/14**

Ethnic group detail	n	%
White - British	4832	95%
White - Any other white background	112	2%
Other Ethnic Groups - Any other ethnic group	30	1%
Other Ethnic Groups - Chinese	16	<1%
Asian or Asian British - Any other Asian background	14	<1%
Mixed - Any other mixed background	10	<1%
Black or Black British - African	9	<1%
Asian or Asian British - Bangladeshi	8	<1%
White - Irish	8	<1%
Asian or Asian British - Indian	5	<1%
Asian or Asian British - Pakistani	5	<1%
Black or Black British - Any other Black background	5	<1%
Mixed - White and Asian	***	<1%
Mixed - White and Black African	***	<1%
Mixed - White and Black Caribbean	***	<1%
<b>Total</b>	<b>5061</b>	<b>100%</b>

## YOUNG PEOPLE IN CUMBRIA

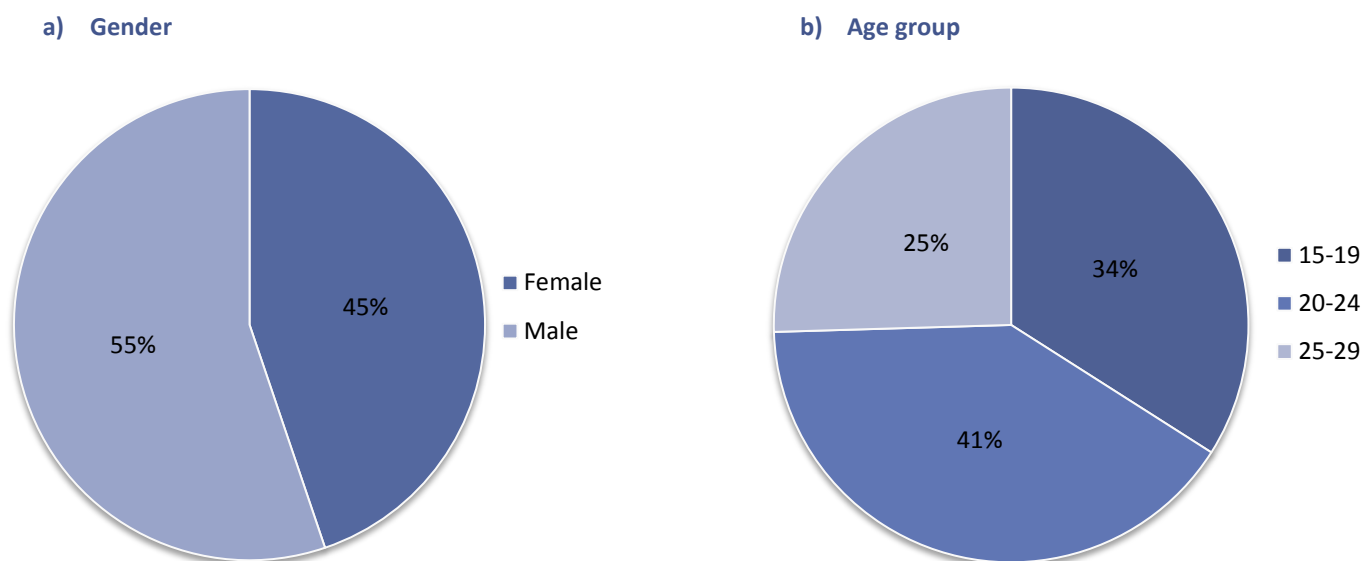
The World Health Organization (WHO) reported RTCs as the leading cause of death among 15-19 year olds (WHO, 2013), and as previously illustrated in Table 1, young people in Cumbria aged between 15 and 29 years accounted for 42% of the RTC attendances between 2011/12 and 2013/14 (n=2,560). It has been suggested that this is due to their lack of experience of driving at high speed, distractions from passengers, driving at night and the tendency to drive older, smaller and less well-protected cars (Neary et al., 2011).

Over half of Cumbria's population live in rural areas and many of its roads pose risks to drivers, particularly young drivers. A study concluded that young rural drivers were nearly twice (44%) as likely to be involved in a RTC which resulted in injury compared to young urban drivers (Fosdick, 2013).

The gender and five-year age groups of Cumbria residents aged between 15 and 29 years attending an ED with injuries sustained from RTCs are presented in Figure 4. Over half (55%) were male (n=1,413; Figure 4a) and over two in five (41%) were aged between 20 and 24 years (n=1,037), followed by just over a third (34%) aged between 15 and 19 years (n=871) and a quarter (25%) aged between 25 and 29 years (n=652; Figure 4b).

<sup>F</sup> Of the 1,905 records with no ethnicity recorded, 312 were categorised as not known, 507 were not stated and 1,086 were blank; though it should be noted that Furness General Hospital only started collecting ethnicity in January 2013. These records have been omitted from the table.

Figure 4: ED attendances for RTC injuries by gender and five-year age group (Cumbria residents aged 15-29 years), 2011/12 to 2013/14<sup>G</sup>



<sup>G</sup> ED attendances (Cumbria residents aged 15-29 years) = 2,560.

## YOUNG DRIVERS DEVELOPING A ROAD SAFETY CAMPAIGN

The Cumbria Road Safety Partnership (CRSP) consists of local organisations working together to reduce avoidable deaths and injuries which occur on Cumbria's roads. The partnership was established in 2004 to provide effective planning and implementation of road safety activities.

In 2012, young people in Cumbria developed a safety campaign in conjunction with the CRSP and local radio. The initiative aimed to reduce the number of serious accidents involving young drivers and raise awareness about road safety.

An interactive approach was used to allow young people across Cumbria to take ownership of the issue. Media workshops were held at three colleges across the county and attended by over 100 students aged between 16 and 18 years. The students were asked to think about what messages would have an impact and make them stop and think about road safety.

More than 30 prototype commercials were created by the students, who were encouraged to use their mobile phones and social media sites to promote the work they had done. Twelve students who had created the most imaginative messages were invited to CFM Radio studios to create three broadcast commercials. The commercials were played on CFM Radio (which broadcasts to Cumbria and South West Scotland) and The Bay (which broadcasts to South Cumbria and North Lancashire) stations.

Chief Inspector Kevin Greenhow said: *"This was a great opportunity to engage and interact with young people, to look into the reasons why young drivers are at risk on the roads and how we can communicate with young people to help to prevent avoidable collisions, injuries and deaths occurring."*

*"It is a priority for Cumbria Police and the partnership to raise awareness amongst young people and those who have recently passed their driving test about the potential dangers on the roads. Cumbria has some of the most challenging roads and conditions, which can pose dangers for those who have been driving for most of their lives. Younger drivers who have limited experience need to be aware."*

Source: <http://www.cumbria24.com/news/2012/11/26/young-drivers-help-producing-new-campaign>

(Cumbria 24, 2012)



RTCs pose a burden on health services and residents in Cumbria. Looking at when accidents and ED attendances peak can provide a resource for identifying when health service need is greatest; the date and time of ED attendances and ambulance call outs are presented in the following charts. Furthermore, some demographic groups require further support and/or treatment following their injury which again increases costs on health care services. Data presented later in this section reports on the disposal method of patients attending EDs with RTC injuries and the transfer description of ambulance call outs.

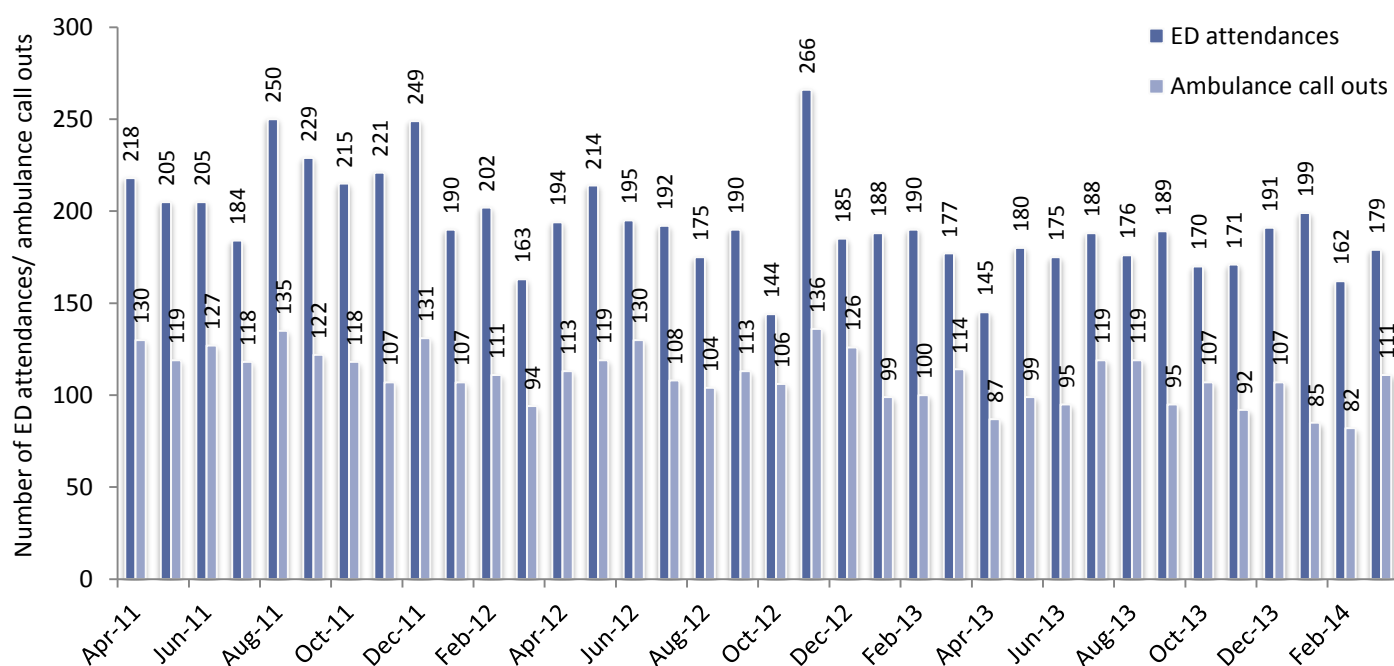
A comprehensive understanding of RTCs is needed in order to successfully inform prevention strategies and support local work. However, the PHOF indicator for RTCs only reports on those killed or seriously injured (KSI) which doesn't provide a complete picture of the burden of RTCs on health services, only serious incidents. Furthermore, many nationally published figures (including the PHOF indicator) use data collected by the police via the STATS19 system; therefore incidents where injuries require treatment from a local ED, but are not serious enough to be reported to the police, are not included.

Nationally, the STATS19 system collects data on RTCs on public roads resulting in injury or death which are reported to the police. The Department for Transport and Public Health England use STATS19 data for statistical reporting. However, RTCs not reported to the police are unlikely to be included in these figures and therefore STATS19 does not hold a complete record of all RTC-related injuries. In response to this, the National Institute for Health and Care Excellence (2010) recommends the monitoring and surveillance of injury data and sharing between organisations (including hospitals, the ambulance service and the police) to overcome gaps in knowledge.

Calculated as a daily average, Figure 5 shows that between April 2011 and March 2014, ED attendances due to RTCs peaked in November 2012 (8.87 per day), August 2011 (8.06 per day) and December 2011 (8.03 per day). It should be noted that there were very strong winds across the northern half of the UK during late November to mid-December 2011 and heavy rainfall in late November 2012 which resulted in one of the wettest weeks in England in the last 50 years (Met Office, 2014), which could have attributed to an increase in RTC-related injury attendances in December 2011 and November 2012.

There was a slight peak in ambulance call outs for traffic/road transportation in November 2012 (4.53 per day), though generally, call outs remained relatively steady over the three years, with the overall number reducing year on year (Figure 5).

**Figure 5: ED attendances for RTC injuries and ambulance call outs for traffic/transportation accidents by month and year, 2011/12 to 2013/14**



The day of the week with the highest number of RTC ED attendances was Friday (n=1,119; 16%). Likewise, the highest proportion of ambulance call outs for traffic/transportation accidents was also Friday (n=665; 17%; Figure 6).

**Figure 6: ED attendances for RTC injuries and ambulance call outs for traffic/transportation accidents by day, 2011/12 to 2013/14**

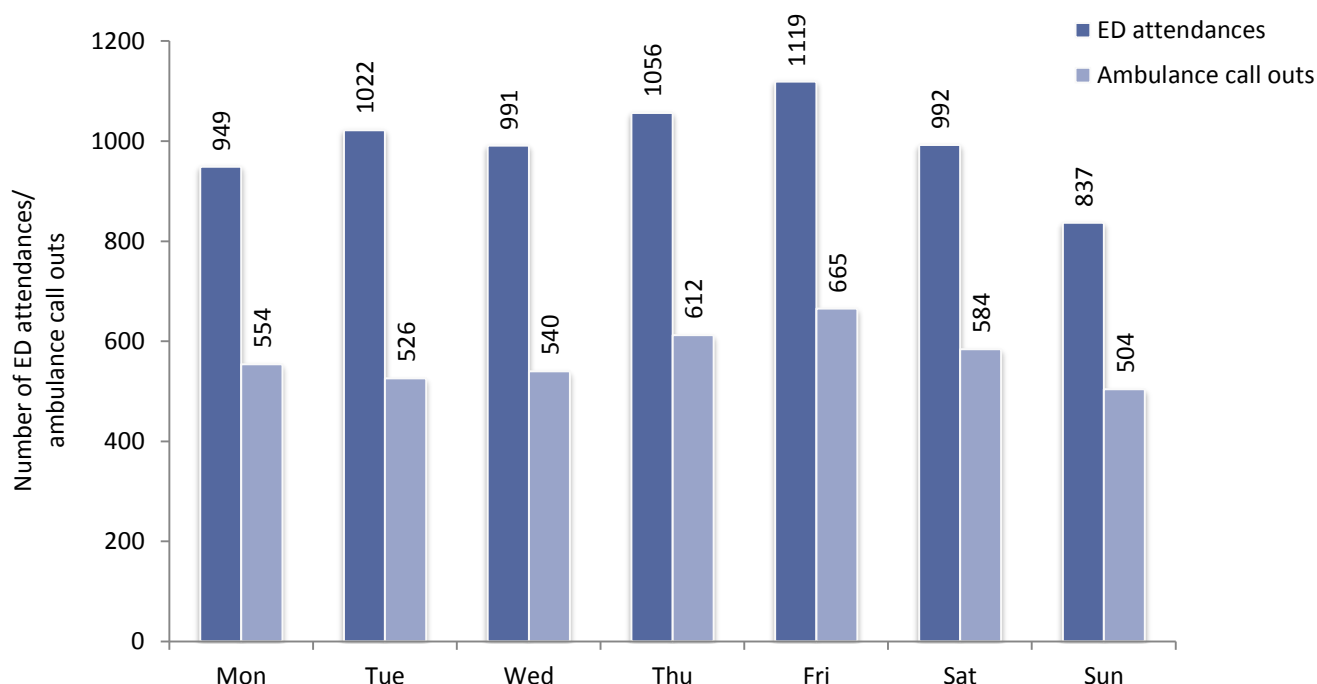
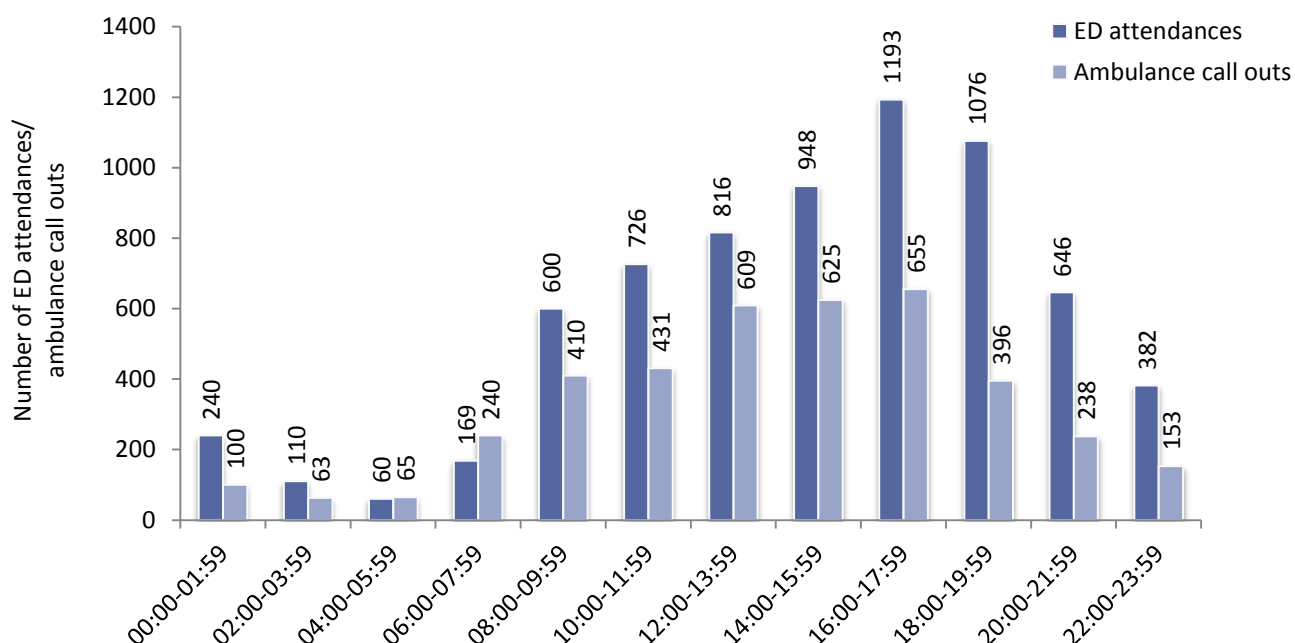


Figure 7 shows two-hour time groups of ED attendances due to RTCs and ambulance call outs for traffic/transportation accidents. Overall, the majority (67%) of ED attendances were between 12:00 and 20:00 (n=4,679), peaking at 1,193 attendances between 16:00 and 17:59 (17%). Ambulance call outs peaked between 14:00 and 15:59 (n=625; 16%) and between 16:00 and 17:59 (n=665; 16%).

**Figure 7: ED attendances for RTC injuries and ambulance call outs for traffic/transportation accidents by two-hour time group, 2011/12 to 2013/14**



The disposal method can provide an indication of the severity of injuries sustained. Table 3 shows the majority of ED attendees were discharged with no follow-up treatment required (all attendances = 70%; Cumbria residents = 71%). Just over one in ten patients were discharged with follow-up treatment to be provided by their general practitioner (all attendances and Cumbria residents = 11% each), while under one in ten were admitted to hospital (all attendances = 9%; Cumbria residents = 8%). Over the three years there were 11 patients, all residents of Cumbria, who presented to an ED with RTC injuries and died in the department.

**Table 3: ED attendances for RTC injuries by disposal method, 2011/12 to 2013/14**

Disposal method		All attendances		Cumbria residents	
		n	%	n	%
Admitted	Admitted to hospital bed/became a lodged patient of the same health care provider	623	9%	479	8%
Discharged	Discharged - did not require any follow-up treatment	4869	70%	4280	71%
Follow-up/referral	Discharged - follow-up treatment to be provided by general practitioner	755	11%	665	11%
	Follow-up within ED	18	0%	17	0%
	Referred to ED clinic	108	2%	102	2%
	Referred to fracture clinic	74	1%	73	1%
	Referred to other health care professional	40	1%	18	0%
	Referred to other outpatient clinic	243	3%	215	4%
	Transferred to other health care provider	46	1%	32	1%
Other	Died in department	11	0%	11	0%
	Left department before being treated	133	2%	114	2%
	Left department having refused treatment	15	0%	11	0%
	Other	31	0%	25	0%
Total		6966	100%	6042	100%

Table 4 illustrates the disposal method by age group and gender for Cumbria residents attending an ED between 2011/12 and 2013/14. Just under three-quarters (74%) of females were discharged from hospital with no further treatment for their injuries required, while nearly one in five (18%) required further treatment and 6% were admitted to hospital. The proportions for each method of disposal were similar for females aged between 15 and 29 and between 30 and 59 years, the age groups which contained the highest number of attendances. Females aged four years and under and between five and 14 were more likely to be discharged from hospital (95% and 82% respectively) with few requiring further treatment or being admitted. Older females aged 60 years and above were less likely to be discharged from hospital (61%) and more likely to require follow-up treatment (23%) or be admitted to hospital (<20%) when compared to females overall.

In comparison to females, a smaller proportion of males were discharged (68%) and a higher proportion admitted to hospital (9%). The overall proportions of disposal method for males were similar in the 15-29 and 30-59 age categories which were the age groups with the highest number of attendances. Male children aged four years or less were more likely to be discharged from hospital (81%) and 5-14 year old males were more likely to be admitted (<20%) with fewer who required follow-up treatment (16%) in comparison to males overall. Compared to males overall, older males aged 60 years or more were more likely to be admitted to hospital (20%) and less likely to be discharged (60%).

**Table 4: ED attendances for RTC injuries by disposal method, age group and gender (Cumbria residents), 2011/12 to 2013/14**

Disposal method	Age group											
	0-4		5-14		15-29		30-59		60+		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
	Females											
Admitted	***	<5%	14	9%	55	5%	53	5%	<50	<20%	168	6%
Discharged	80	95%	134	82%	854	74%	728	74%	181	61%	1977	74%
Follow-up/referral	***	<5%	<15	<10%	198	17%	185	19%	70	23%	469	18%
Other	***	<5%	***	<5%	40	3%	19	2%	***	<5%	63	2%
Total	84	100%	163	100%	1147	100%	985	100%	298	100%	2677	100%
Disposal method	Males											
	<10	<10%	<30	<20%	103	7%	111	8%	65	20%	311	9%
	56	81%	120	68%	977	69%	951	69%	199	60%	2303	68%
	7	10%	28	16%	280	20%	279	20%	59	18%	653	19%
	***	<5%	***	<5%	53	4%	35	3%	8	2%	98	3%
	69	100%	176	100%	1413	100%	1376	100%	331	100%	3365	100%

The transfer description of ambulance call outs for traffic/transportation accidents are presented in Table 5. Over three in five (62%) call outs resulted in the patient being transferred to an ED within the North West of England. Over one-third (34%) were not transferred to an ED or other health care provider (e.g. walk-in centre or hospital without an ED). Call outs where no transfer is required could be due to paramedics treating the patient at the scene or instances where more than one ambulance had been called but only one unit was required.

**Table 5: Ambulance call outs for traffic/transportation accidents by transfer description, 2011/12 to 2013/14<sup>H</sup>**

Transfer description	n	%
Transferred to ED in the North West	2459	62%
No transfer	1338	34%
Transferred to other health care provider in the North West	134	3%
Transferred outside of the North West	54	1%
<b>Total</b>	<b>3985</b>	<b>100%</b>

Table 6 shows that of the transfers to EDs, more than two in five (43%) patients were taken to Cumberland Infirmary and just under a quarter (24%) were taken to West Cumberland Hospital. Seventeen per cent were taken to Furness General Hospital and 14% were taken to Royal Lancaster Infirmary in north Lancashire.

**Table 6: Ambulance call outs for traffic/transportation accidents by ED attended, 2011/12 to 2013/14**

ED transferred to	County	n	%
Cumberland Infirmary	Cumbria	1064	43%
West Cumberland Hospital	Cumbria	589	24%
Furness General Hospital	Cumbria	421	17%
Royal Lancaster Infirmary	Lancashire	337	14%
Royal Preston Hospital	Lancashire	36	1%
Fairfield General Hospital	Greater Manchester	9	0%
Alder Hey Children's Hospital	Merseyside	***	<0%
Blackpool Victoria Hospital	Lancashire	***	<0%
<b>Total</b>		<b>2459</b>	<b>100%</b>

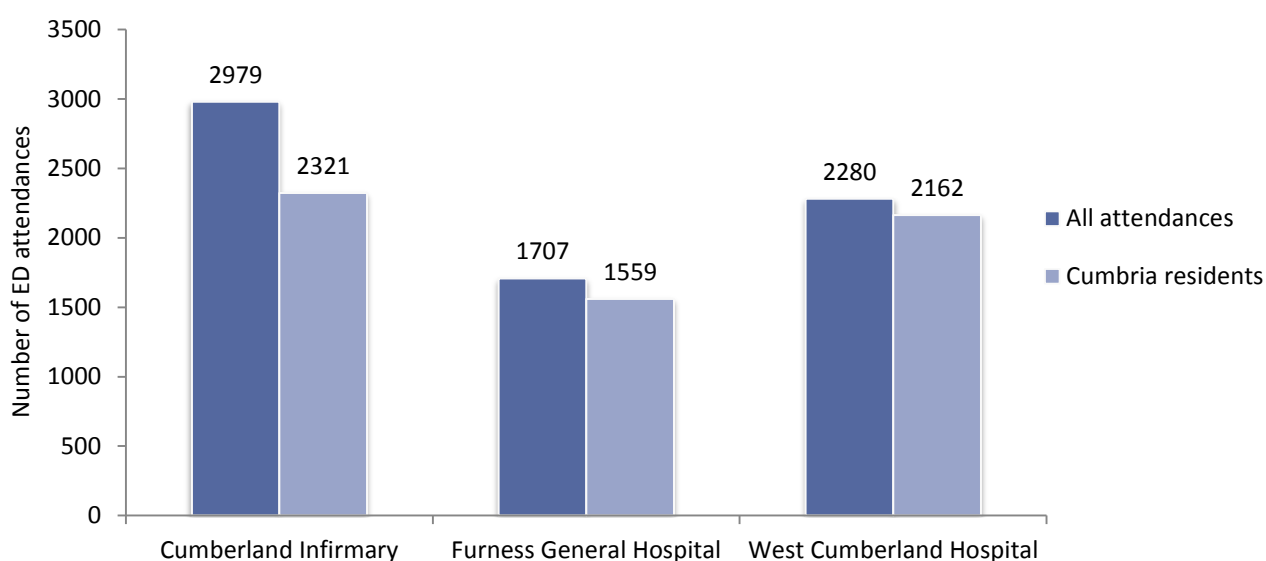
<sup>H</sup> All transfers to other health care provider in the North West were in Cumbria.

Within Cumbria there are substantial differences between the local authority districts, their geography and road network. Barrow-in-Furness in the south west of the county and Carlisle in the north are the largest urban areas, with the West coast isolated and predominantly industrial, and the remainder of the county consisting of rural communities. RTCs are often more prevalent in rural areas where car ownership is high and driving conditions can be particularly demanding in comparison to urban areas where speed limits are lower and traffic calming measures can be enforced (Neary et al., 2011).

Eden, the largest and most rural district in Cumbria, had the highest rate of people killed or seriously injured (KSI) in the county with 91 per 100,000 population KSI in 2010-12 while in comparison Barrow-in-Furness, the smallest district and a large urban area, had the lowest rate at 20 per 100,000 population (PHE, 2014b)<sup>1</sup>. There are differences in these figures and those collated by TIIG (see [Area of residency of emergency department attendees](#)); however, it should be noted that TIIG data covers all injury attendances whereas PHOF data relates to those killed or seriously injured only.

Figure 8 illustrates the number of ED attendances due to RTCs to each hospital in the county. Over two-fifths (43%) of all RTC attendances were to Cumberland Infirmary in the north of the county (n=2,979), while one-third (33%) went to West Cumberland Hospital in the west (n=2,280) and a quarter (25%) to Furness General Hospital in the south (n=1,707). The proportions varied slightly when looking at Cumbria residents only; 38% presented at Cumberland Infirmary (n=2,321), 36% at West Cumberland Hospital (n=2,162) and 26% attended Furness General Hospital (n=1,559).

**Figure 8: ED attendances for RTC injuries by hospital, 2011/12 to 2013/14**

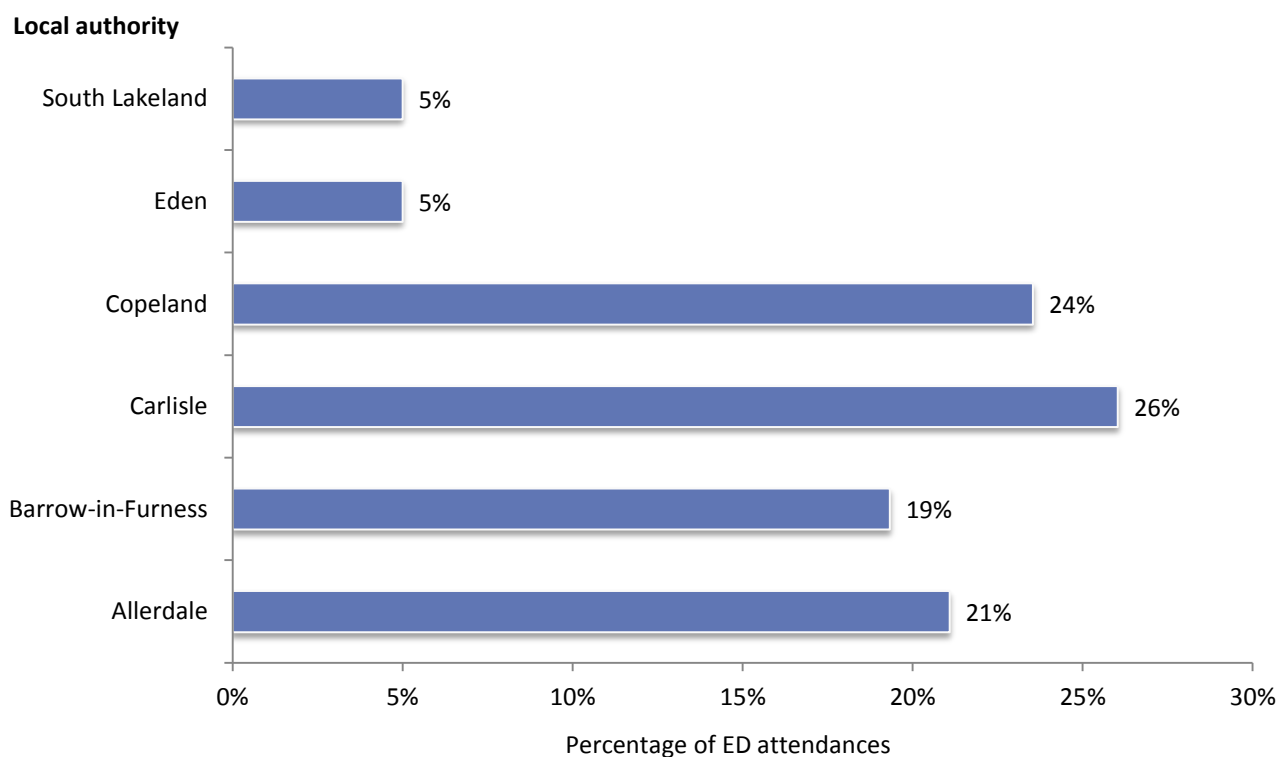


<sup>1</sup> See Appendix A for a full list of the crude rates and confidence intervals.



The local authority of residency of the RTC injury attendees from Cumbria are presented in Figure 9. Over a quarter (26%) of Cumbria residents were from Carlisle local authority (n=1,573) while just under a quarter (24%) were from Copeland (n=1,422). Just over one in five (21%) were from Allerdale (n=1,274) followed by 19% from Barrow-in-Furness (n=1,168). There are disparities between these figures and those published by PHE; however, it should be noted that TIIG data includes all injury attendances to the ED, whereas the PHOF indicator looks at only those killed or seriously injured. Furthermore, it is likely that many residents of Eden and South Lakeland local authorities attend Royal Lancaster Infirmary in Lancashire for emergency treatment.

**Figure 9: ED attendances for RTC injuries by local authority district of residence (Cumbria residents), 2011/12 to 2013/14<sup>J</sup>**



<sup>J</sup> ED attendances (Cumbria residents) = 6,042.

Crude rates per 100,000 resident population of RTC attendances have been calculated and presented in Table 7. The crude rate of Cumbria residents attending an ED with injuries sustained by a RTC was 1,211 per 100,000 population. Rates were significantly higher than the average for Cumbria in Allerdale, Barrow-in-Furness, Carlisle and Copeland local authority districts, with rates significantly lower in Eden and South Lakeland. Again there are differences between these figures and those published by PHE, which reported rates of those killed and seriously injured significantly worse than the England average in Allerdale, Eden and South Lakeland local authorities (PHE, 2014b).

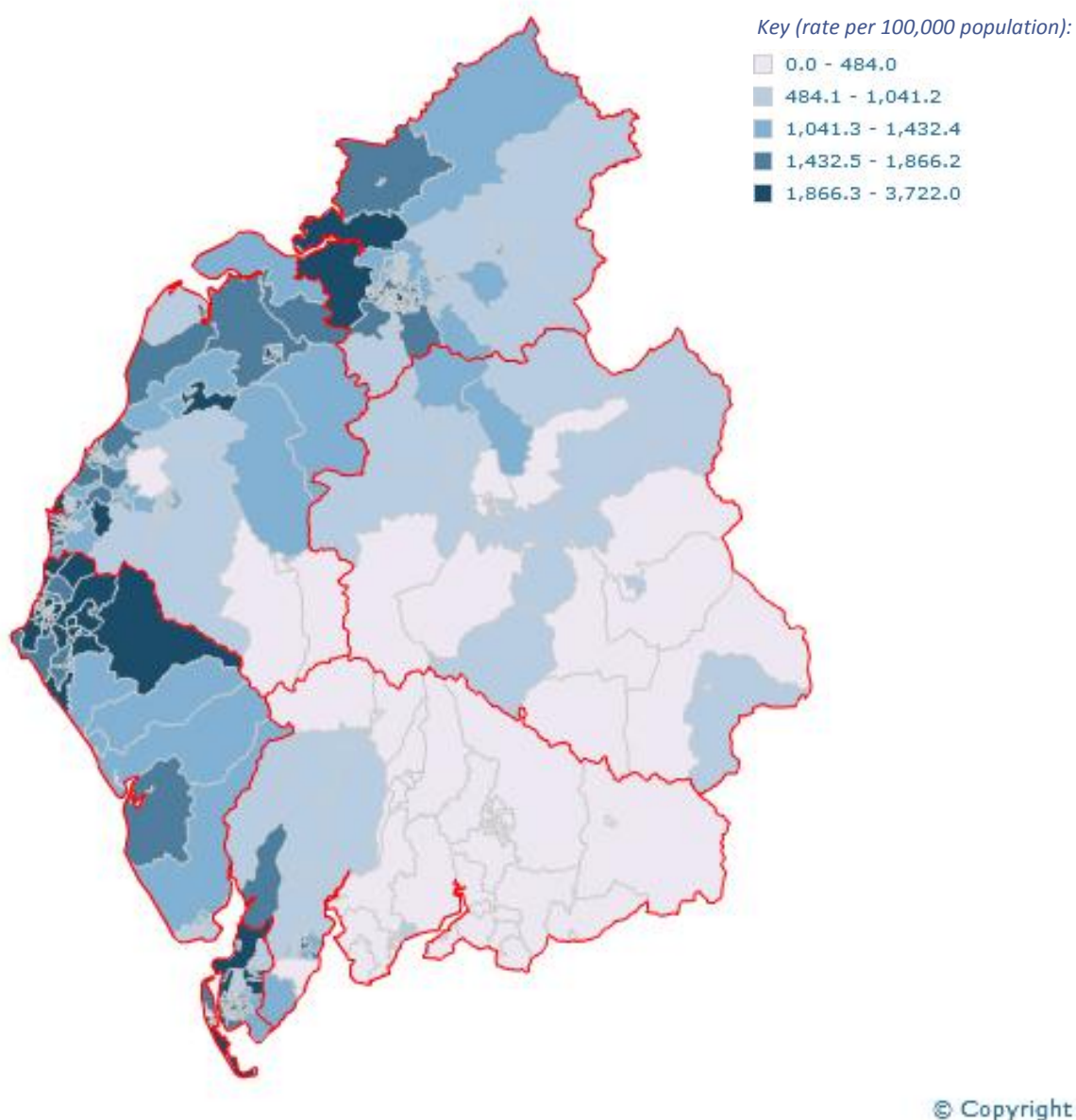
**Table 7: Number and crude rates per 100,000 population of ED attendances for RTC injuries by local authority district of residence (Cumbria residents), 2011/12 to 2013/14**

Local authority	n	Crude rate per 100,000	95% confidence intervals	
			Lower limit	Upper limit
Allerdale	1274	1323	1252	1398
Barrow-in-Furness	1168	1706	1610	1807
Carlisle	1573	1457	1386	1531
Copeland	1422	2022	1918	2130
Eden	281	534	473	600
South Lakeland	324	313	280	349
<b>Cumbria</b>	<b>6042</b>	<b>1211</b>	<b>1180</b>	<b>1241</b>

Map 1 illustrates the crude rates per 100,000 population of the Lower Super Output Area (LSOA) of Cumbria residents attending an ED with RTC injuries, overlaid by local authority boundaries. The five LSOAs where rates were highest were Carlisle 011F, Copeland 003C, Copeland 004B, Copeland 005A and Copeland 004H<sup>K</sup>.

<sup>K</sup> A full list of the number, crude rate and confidence intervals is available upon request.

**Map 1: Crude rates per 100,000 population of ED attendances for RTC injuries by LSOA of residence, overlaid by local authority district boundaries (Cumbria residents), 2011/12 to 2013/14**



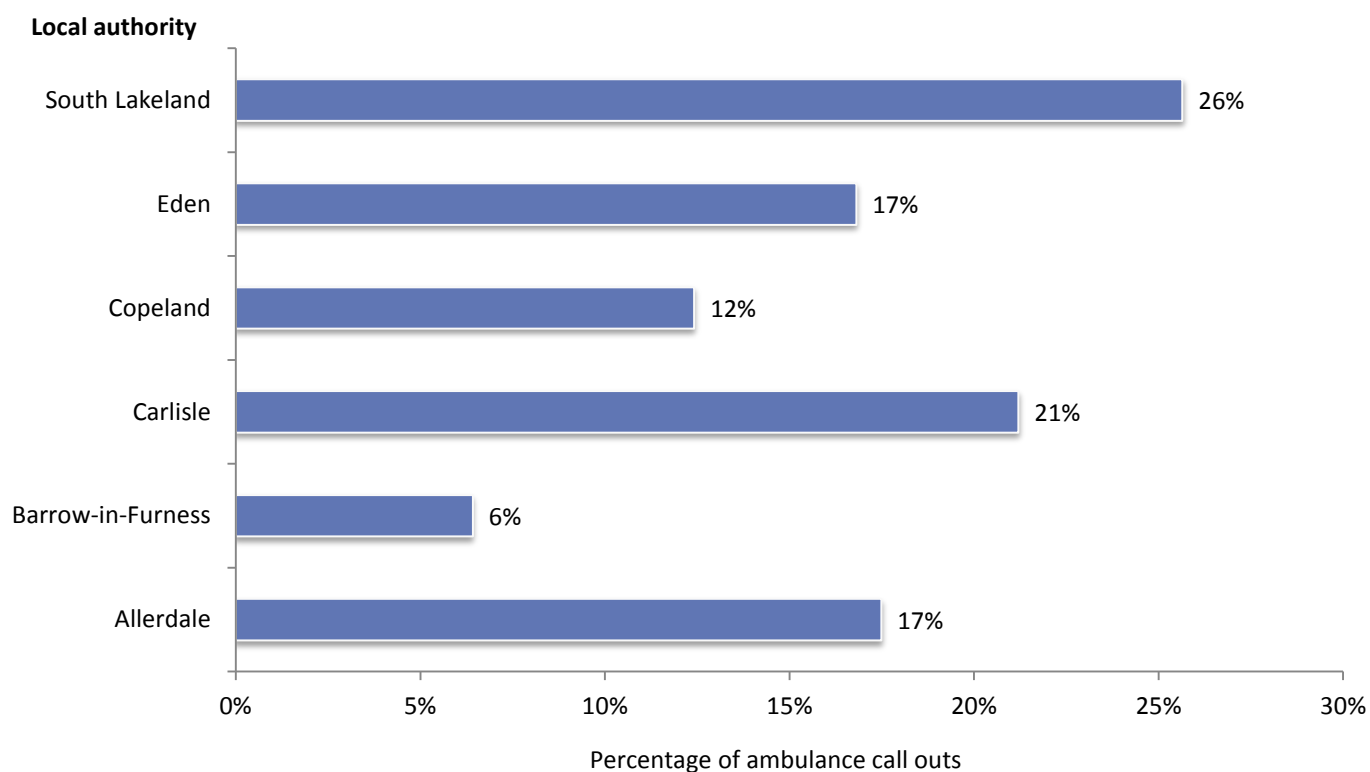
**Five highest crude rates per 100,000 population**

LSOA code	LSOA name	n	Crude rate per 100,000	95% confidence interval	
				Lower limit	Upper limit
E01019245	Carlisle 011F	59	3722	2834	4802
E01019284	Copeland 003C	46	3713	2718	4952
E01019263	Copeland 004B	41	3559	2554	4828
E01019291	Copeland 005A	46	3511	2571	4684
E01019277	Copeland 004H	42	3497	2520	4727
<b>Cumbria</b>		<b>6042</b>	<b>1211</b>	<b>1180</b>	<b>1241</b>

## LOCATION OF AMBULANCE CALL OUTS

Figure 10 outlines the local authority district of the location of ambulance call outs for traffic/transportation accidents<sup>L</sup>. Call outs were highest in South Lakeland local authority where over a quarter (26%) of ambulances were requested to (n=1,022), followed by just over one in five (21%) to Carlisle (n=845). Allerdale (n=697) and Eden (n=670) local authorities saw an equal proportion of call outs for traffic/transportation accidents (17% each).

**Figure 10: Ambulance call outs for traffic/transportation accidents by local authority of call out location, 2011/12 to 2013/14<sup>M</sup>**



<sup>L</sup> The North West Ambulance Service reports on the location of where the ambulance was requested to. It should be noted this may not be the same location as where the incident occurred nor in the locality of where the patient resides.

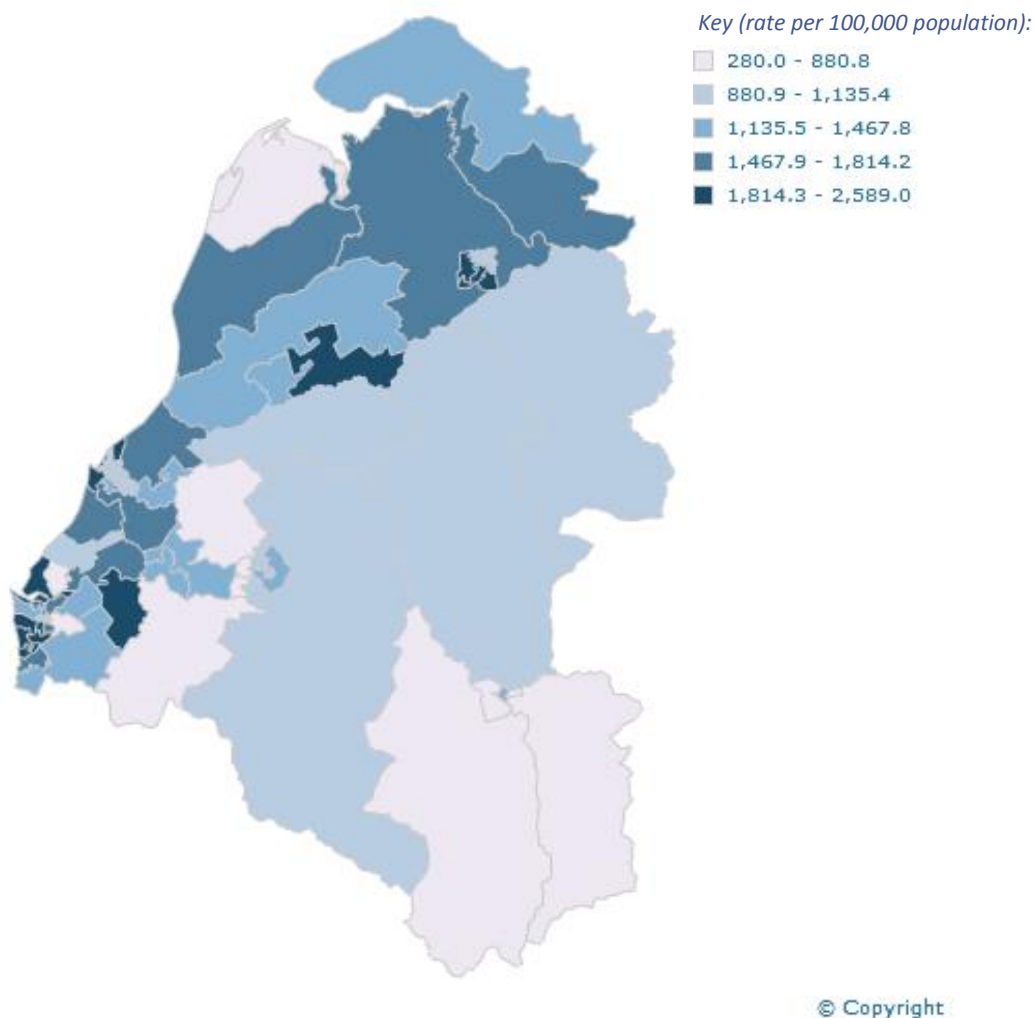
<sup>M</sup> Ambulance call outs = 3,985.

This section of the report explores RTC injury attendances between April 2011 and March 2014 by each tier 2 local authority district across Cumbria<sup>N,O</sup>.

## ALLERDALE

There were 1,274 RTC-related injury attendances made by residents of Allerdale local authority between 2011/12 and 2013/14, which accounted for just over one-fifth (21%) of attendances made by Cumbria residents. The crude rate of RTC attendances was 1,323 per 100,000 population, significantly higher than the Cumbria average (1,211 per 100,000 population). The rates by LSOA for Allerdale residents are presented in Map 2. The five LSOAs where rates were highest were Allerdale 010A, Allerdale 009A, Allerdale 009C, Allerdale 011A and Allerdale 001E.

**Map 2: Crude rates per 100,000 population of ED attendances for RTC injuries by LSOA of residence (Allerdale residents), 2011/12 to 2013/14**



<sup>N</sup> A full list of the number, crude rate and confidence intervals for each LSOA of residence is available upon request.

<sup>O</sup> 'Other' disposal method in the following tables include: died in department; left department before being treated; left department having refused treatment; and, other.

Overall there were more males than females (males=700; 55%). Just over two in five (41%) were aged between 15 and 29 years and exactly two in five (40%) aged between 30 and 59 years (Table 8). Males aged between 30 and 59 years accounted for the largest number of ED attendees from Allerdale (n=307), followed by males aged between 15 and 29 years (n=274).

**Table 8: ED attendances for RTC injuries by gender and age group (Allerdale residents), 2011/12 to 2013/14**

Age group	Female		Male		Total	
	n	%	n	%	n	%
0-4	19	3%	15	2%	34	3%
5-14	31	5%	30	4%	61	5%
15-29	249	43%	274	39%	523	41%
30-59	204	36%	307	44%	511	40%
60+	71	12%	74	11%	145	11%
<b>Total</b>	<b>574</b>	<b>100%</b>	<b>700</b>	<b>100%</b>	<b>1274</b>	<b>100%</b>

Just over three-quarters (76%) of Allerdale residents presenting with RTC injuries were discharged from hospital with no further treatment required, while 13% required follow-up treatment for their injuries and 9% were admitted to hospital (Table 9). There were some slight variations across by gender for this trend; a slightly higher proportion of females were discharged (83%) and a slightly lower proportion were referred for follow-up treatment (11%) or admitted (<10%); and conversely, fewer males were discharged (71%) while more required further treatment (15%) or were admitted (<15%).

**Table 9: ED attendances for RTC injuries by gender and disposal method (Allerdale residents), 2011/12 to 2013/14**

Disposal method	Female		Male		Total	
	n	%	n	%	n	%
Admitted	<35	<10%	<90	<15%	117	9%
Discharged	476	83%	498	71%	974	76%
Follow-up/referral	62	11%	104	15%	166	13%
Other	***	<5%	<15	<5%	17	1%
<b>Total</b>	<b>574</b>	<b>100%</b>	<b>700</b>	<b>100%</b>	<b>1274</b>	<b>100%</b>

Between 2011/12 and 2013/14 there were 1,168 residents of Barrow-in-Furness local authority presenting with injuries sustained by a RTC. This relates to just under one in five (19%) of the total number of RTC-related injuries made by Cumbria residents. At a rate of 1,706 per 100,000 population, the crude rate of RTC attendances made by residents of Barrow-in-Furness local authority was significantly higher than the whole of Cumbria (1,211 per 100,000 population). Map 3 illustrates the rates for each LSOA of residence in Barrow-in-Furness local authority. The five LSOAs where rates were highest were Barrow-in-Furness 010B, Barrow-in-Furness 005E, Barrow-in-Furness 002B, Barrow-in-Furness 004E and Barrow-in-Furness 002A.

**Map 3: Crude rates per 100,000 population of ED attendances for RTC injuries by LSOA of residence (Barrow-in-Furness residents), 2011/12 to 2013/14**

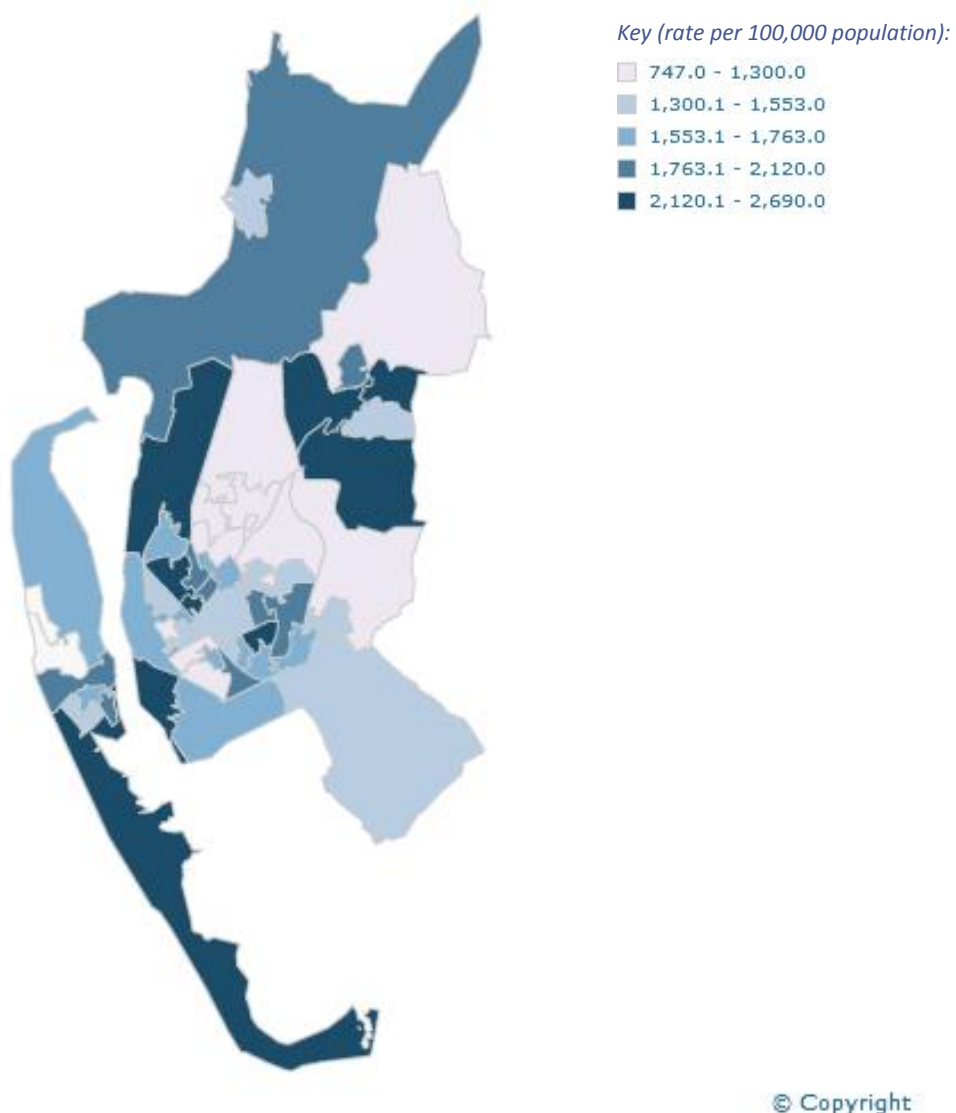




Table 10 shows that overall there were more males than females (males=620; 53%), over two in five (42%) aged between 15 and 29 years and just under two in five (39%) aged between 30 and 59 years. Males aged between 15 and 29 years (n=254) and between 30 and 59 years (n=263) accounted for the largest numbers of RTC attendees from Barrow-in-Furness local authority.

**Table 10: ED attendances for RTC injuries by gender and age group (Barrow-in-Furness residents), 2011/12 to 2013/14**

Age group	Female		Male		Total	
	n	%	n	%	n	%
0-4	20	4%	12	2%	32	3%
5-14	39	7%	28	5%	67	6%
15-29	231	42%	254	41%	485	42%
30-59	191	35%	263	42%	454	39%
60+	67	12%	63	10%	130	11%
<b>Total</b>	<b>548</b>	<b>100%</b>	<b>620</b>	<b>100%</b>	<b>1168</b>	<b>100%</b>

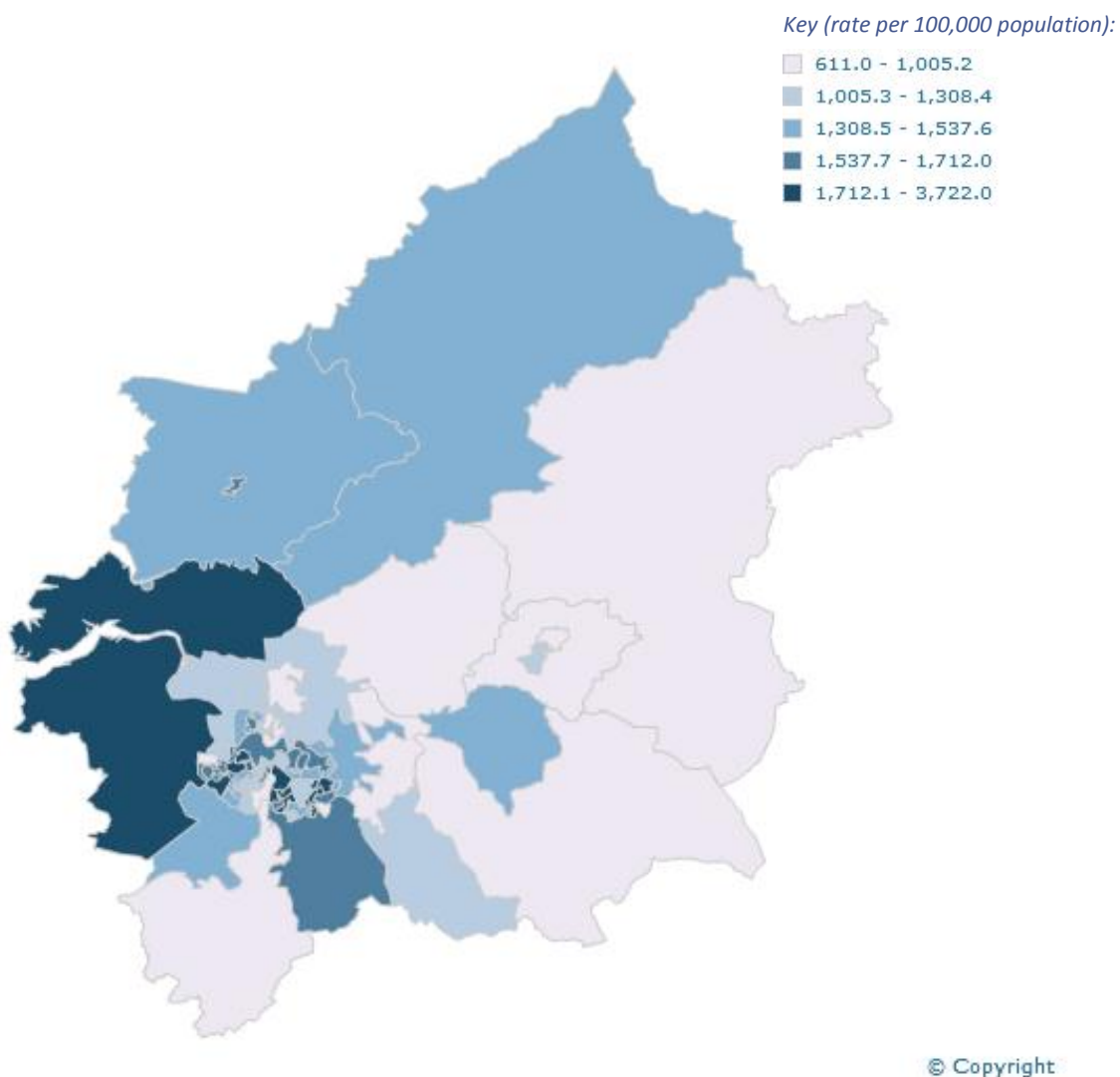
The disposal method of RTC attendees from Barrow-in-Furness local authority are presented in Table 11. Between 2011/12 and 2013/14 under three in five (58%) were discharged from hospital with no further treatment required while one-third (33%) required a referral for further treatment and just 5% were admitted to hospital. These figures were similar across both gender categories.

**Table 11: ED attendances for RTC injuries by gender and disposal method (Barrow-in-Furness residents), 2011/12 to 2013/14**

Disposal method	Female		Male		Total	
	n	%	n	%	n	%
Admitted	18	3%	40	6%	58	5%
Discharged	323	59%	349	56%	672	58%
Follow-up/referral	178	32%	210	34%	388	33%
Other	29	5%	21	3%	50	4%
<b>Total</b>	<b>548</b>	<b>100%</b>	<b>620</b>	<b>100%</b>	<b>1168</b>	<b>100%</b>

There were 1,573 residents of Carlisle local authority presenting to an ED with RTC-related injuries between 2011/12 and 2013/14. Carlisle residents accounted for just over a quarter (26%) of the total number of RTC attendances across Cumbria. The overall crude rate of ED attendances made by residents of Carlisle local authority was 1,457 per 100,000 population, significantly higher than the average for Cumbria (1,211 per 100,000 population). Rates for each LSOA of Carlisle are shown in Map 4; with rates highest in Carlisle 011F, Carlisle 009A, Carlisle 008B, Carlisle 012E and Carlisle 005C.

**Map 4: Crude rates per 100,000 population of ED attendances for RTC injuries by LSOA of residence (Carlisle residents), 2011/12 to 2013/14**



Males accounted for almost three in five (58%) RTC injury attendances (Table 12). Over two in five (44%) were aged between 15 and 29 years while 38% were aged between 30 and 59 years. Males aged between 15 and 29 years accounted for the largest number of attendees (n=392) followed by 30-59 year old males (n=354).

**Table 12: ED attendances for RTC injuries by gender and age group (Carlisle residents), 2011/12 to 2013/14**

Age group	Female		Male		Total	
	n	%	n	%	n	%
0-4	24	4%	20	2%	44	3%
5-14	42	6%	72	8%	114	7%
15-29	295	45%	392	43%	687	44%
30-59	243	37%	354	39%	597	38%
60+	52	8%	79	9%	131	8%
<b>Total</b>	<b>656</b>	<b>100%</b>	<b>917</b>	<b>100%</b>	<b>1573</b>	<b>100%</b>

Three-quarters (75%) of RTC attendees from Carlisle local authority were discharged from hospital with no further treatment required (Table 13). Fourteen per cent of attendees were referred for further treatment and 8% were admitted to hospital due to their injuries. Figures were similar across both gender groups with the exception of females who had a slightly larger proportion discharged from hospital (79%).

**Table 13: ED attendances for RTC injuries by gender and disposal method (Carlisle residents), 2011/12 to 2013/14**

Disposal method	Female		Male		Total	
	n	%	n	%	n	%
Admitted	45	7%	83	9%	128	8%
Discharged	518	79%	665	73%	1183	75%
Follow-up/referral	76	12%	140	15%	216	14%
Other	17	3%	29	3%	46	3%
<b>Total</b>	<b>656</b>	<b>100%</b>	<b>917</b>	<b>100%</b>	<b>1573</b>	<b>100%</b>

Between 2011/12 and 2013/14 there were 1,422 ED attendances made by residents of Copeland local authority due to RTCs. This accounted for just under a quarter (24%) of the total number of RTC attendances made by Cumbria residents. At a rate of 2,022 per 100,000 population, the crude rate of RTC attendances made by residents of Copeland local authority was significantly higher than the whole of Cumbria (1,211 per 100,000 population). Map 5 illustrates the rates for each LSOA of residence in Copeland local authority. The five LSOAs where rates were highest were Copeland 003C, Copeland 004B, Copeland 005A, Copeland 004H and Copeland 003D.

**Map 5: Crude rates per 100,000 population of ED attendances for RTC injuries by LSOA of residence (Copeland residents), 2011/12 to 2013/14**

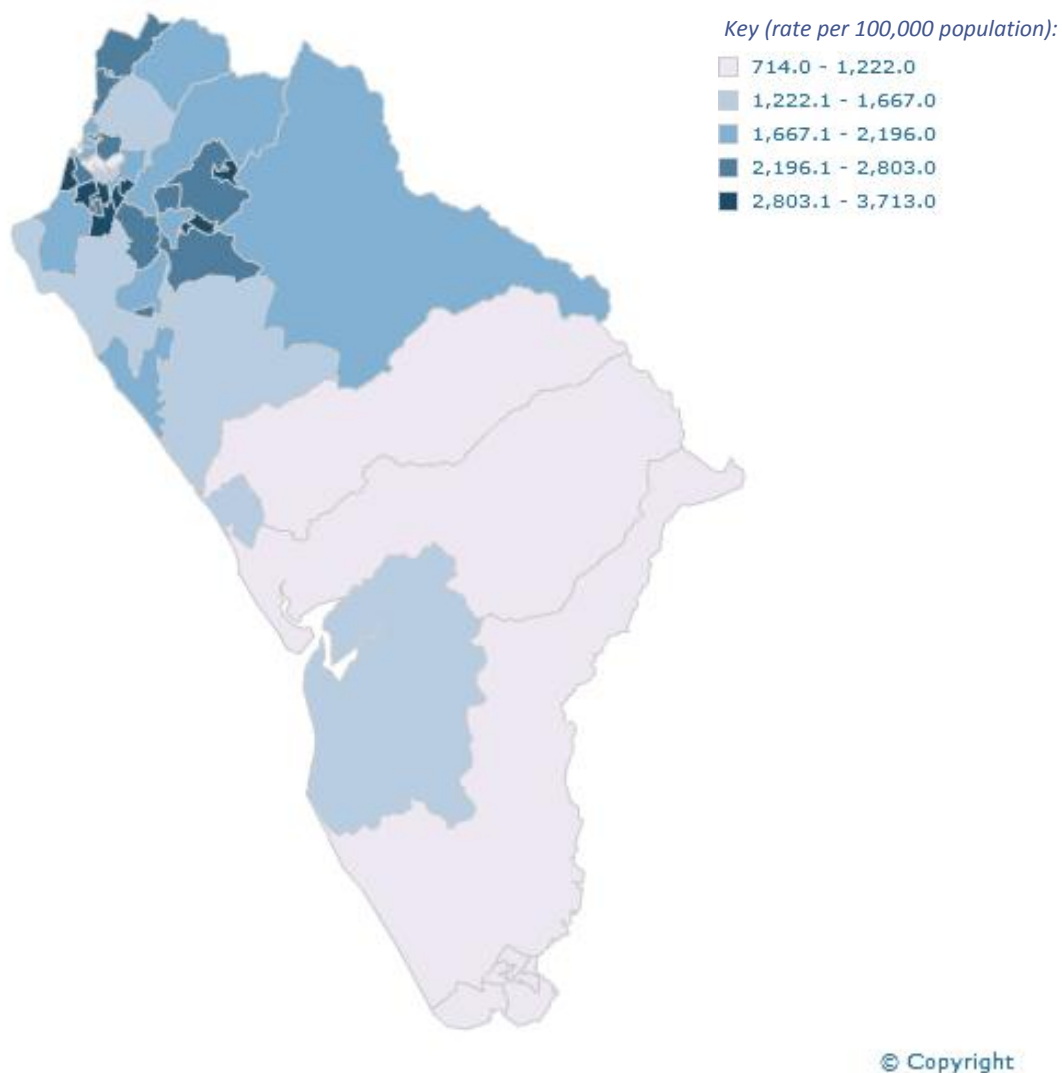


Table 14 shows there were more males than females (males=779; 55%) and over two in five (43%) residents were aged between 15 and 29 years and exactly two in five (40%) were aged between 30 and 59 years. Males aged between 15 and 29 years accounted for the largest number of RTC attendances from Copeland local authority (n=340), followed by 30-59 year old males (n=323).

**Table 14: ED attendances for RTC injuries by gender and age group (Copeland residents), 2011/12 to 2013/14**

Age group	Female		Male		Total	
	n	%	n	%	n	%
0-4	20	3%	17	2%	37	3%
5-14	44	7%	40	5%	84	6%
15-29	265	41%	340	44%	605	43%
30-59	250	39%	323	41%	573	40%
60+	64	10%	59	8%	123	9%
<b>Total</b>	<b>643</b>	<b>100%</b>	<b>779</b>	<b>100%</b>	<b>1422</b>	<b>100%</b>

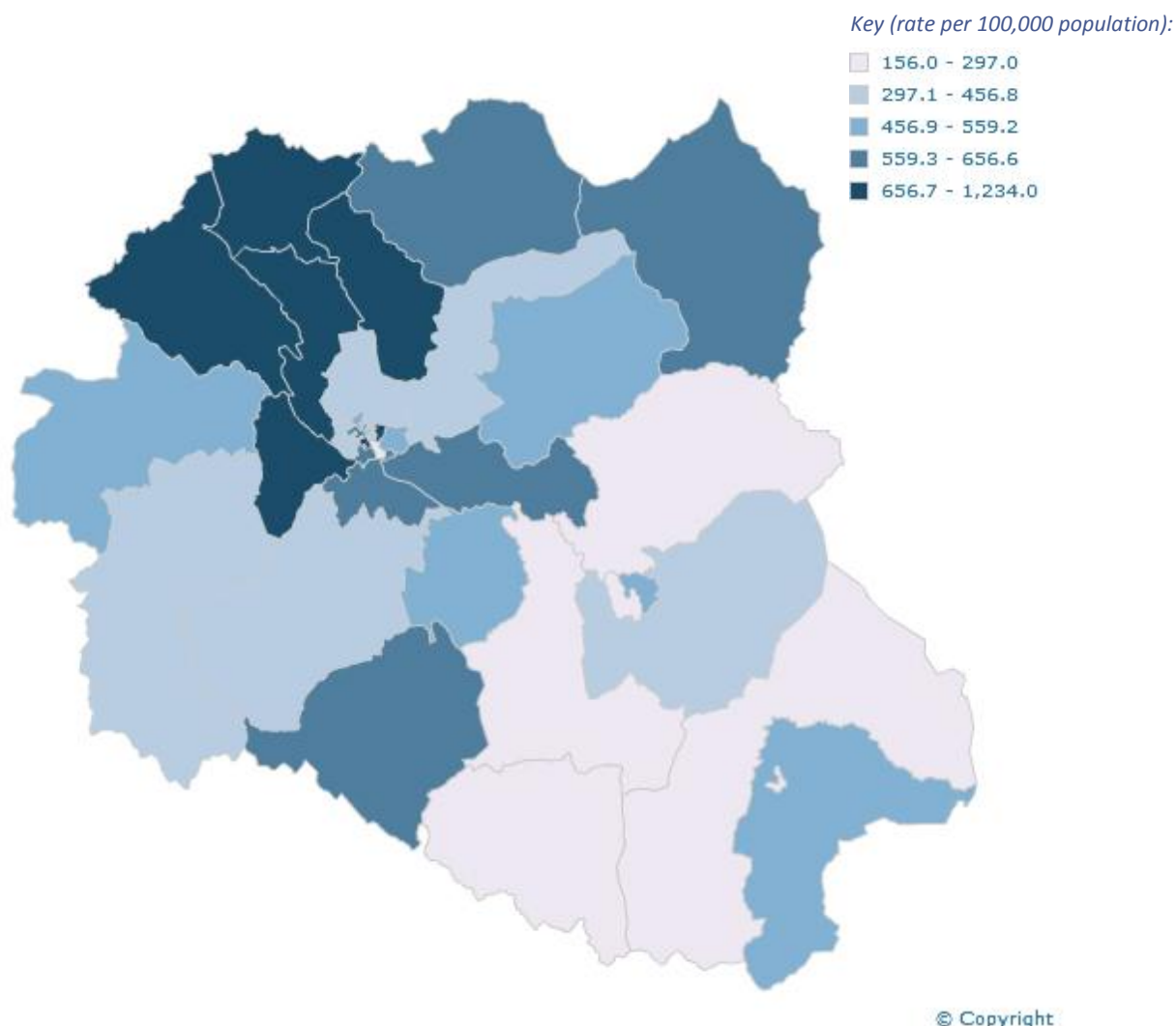
Four in five (80%) Copeland residents were discharged from hospital with no further treatment required while 13% required further treatment and 6% were admitted to hospital (Table 15). These figures were similar across both gender categories.

**Table 15: ED attendances for RTC injuries by gender and disposal method (Copeland residents), 2011/12 to 2013/14**

Disposal method	Female		Male		Total	
	n	%	n	%	n	%
Admitted	40	6%	43	6%	83	6%
Discharged	520	81%	611	78%	1131	80%
Follow-up/referral	75	12%	104	13%	179	13%
Other	8	1%	21	3%	29	2%
<b>Total</b>	<b>643</b>	<b>100%</b>	<b>779</b>	<b>100%</b>	<b>1422</b>	<b>100%</b>

There were 281 RTC-related injury attendances made by residents of Eden local authority between 2011/12 and 2013/14, representing 5% of attendances made by residents of Cumbria. The crude rate of RTC attendances was 534 per 100,000 population, significantly lower when compared to the Cumbria average (1,211 per 100,000 population). The rates by LSOA for Eden residents are presented in Map 6; rates were highest in Eden 002C, Eden 002A, Eden 002D, Eden 003C and Eden 005B.

**Map 6: Crude rates per 100,000 population of ED attendances for RTC injuries by LSOA of residence (Eden residents), 2011/12 to 2013/14**



Just under three in five (59%) presentations made by residents of Eden local authority were male (Table 16). Over two in five (43%) were aged between 15 and 29 years and just over one-third (35%) were aged between 30 and 59 years. The proportions of females aged between 15 and 29 years and between 30 and 59 years were similar (38% and 39% respectively). Overall, 15-29 year old males accounted for the largest number of RTC-related attendances made by Eden residents (n=77), followed by males aged between 30 and 59 years (n=55).

**Table 16: ED attendances for RTC injuries by gender and age group (Eden residents), 2011/12 to 2013/14**

Age group	Female		Male		Total	
	n	%	n	%	n	%
0-4	***	<5%	***	<5%	***	<5%
5-14	***	<5%	***	<5%	<10	<5%
15-29	43	38%	77	46%	120	43%
30-59	44	39%	55	33%	99	35%
60+	23	20%	30	18%	53	19%
Total	114	100%	167	100%	281	100%

Table 17 presents the disposal method of RTC attendees from Eden local authority. Less than three in five (56%) were discharged from hospital with no further treatment required while over one in five (22%) required follow-up treatment and exactly one in five (20%) were admitted to hospital. Figures were similar across both males and females.

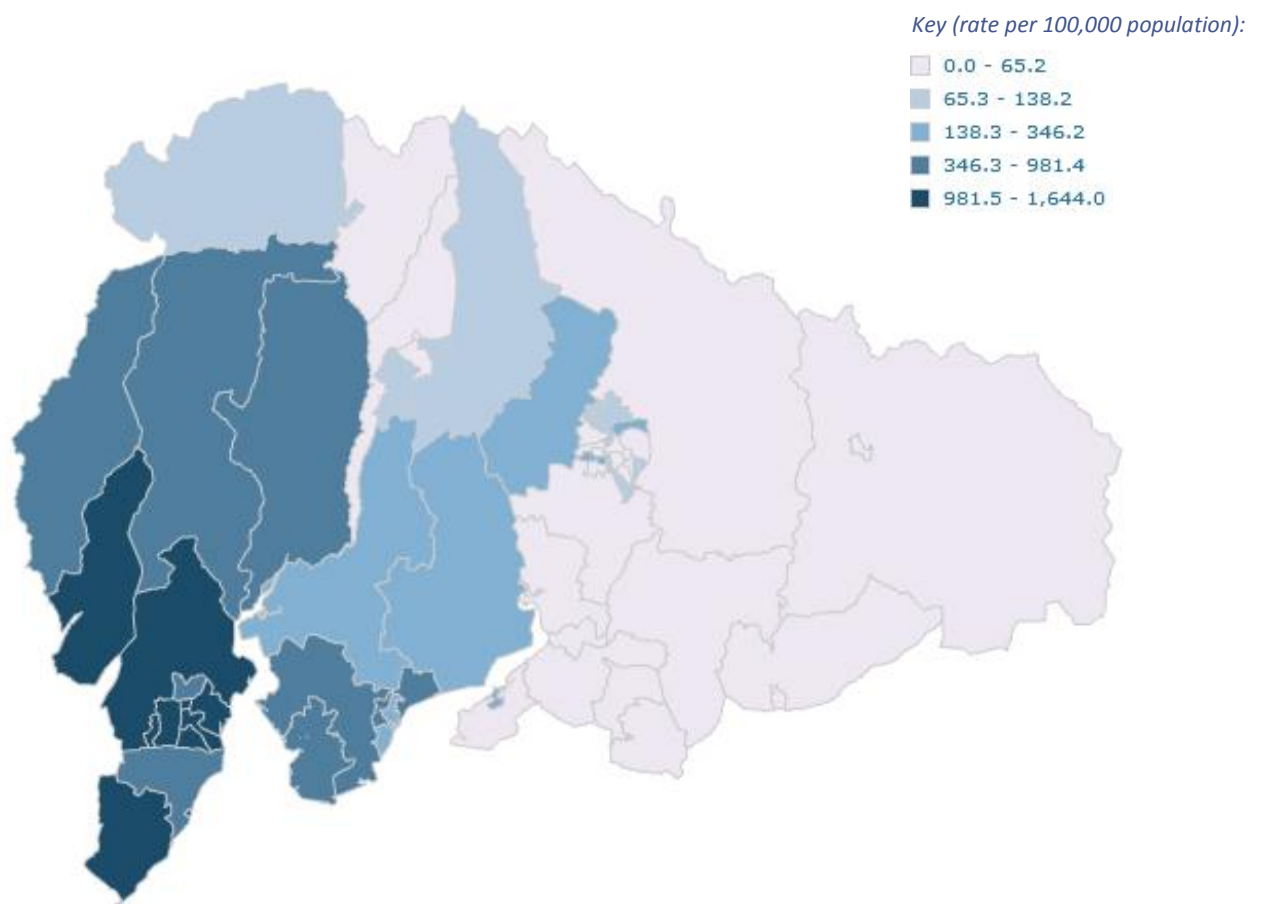
**Table 17: ED attendances for RTC injuries by gender and disposal method (Eden residents), 2011/12 to 2013/14**

Disposal method	Female		Male		Total	
	n	%	n	%	n	%
Admitted	<25	<20%	<40	<25%	56	20%
Discharged	67	59%	89	53%	156	56%
Follow-up/referral	25	22%	38	23%	63	22%
Other	***	<5%	***	<5%	6	2%
Total	114	100%	167	100%	281	100%



There were 324 attendees from South Lakeland local authority presenting with injuries sustained by a RTC, which accounted for 5% of attendances made by residents of Cumbria between 2011/12 and 2013/14. The overall crude rate of ED attendances made by residents of South Lakeland local authority was 313 per 100,000 population, significantly lower than the average for Cumbria (1,211 per 100,000 population). Rates for each LSOA of South Lakeland are illustrated in Map 7. The five LSOAs where rates were highest were South Lakeland 012A, South Lakeland 008B, South Lakeland 012D, South Lakeland 014A and South Lakeland 012B.

**Map 7: Crude rates per 100,000 population of ED attendances for RTC injuries by LSOA of residence (South Lakeland residents), 2011/12 to 2013/14**



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Table 18 shows there were more males than females (males=182; 56%) attending an ED. Over two in five (43%) were aged between 15 and 29 years and just under two in five (39%) were aged between 30 and 59 years. Males aged between 15 and 29 years and between 30 and 59 years accounted for the largest numbers of RTC attendees from South Lakeland local authority (n=76 and 74 respectively).

**Table 18: ED attendances for RTC injuries by gender and age group (South Lakeland residents), 2011/12 to 2013/14**

Age group	Female		Male		Total	
	n	%	n	%	n	%
0-4	***	<5%	***	<5%	5	2%
5-14	***	<5%	***	<5%	5	2%
15-29	64	45%	76	42%	140	43%
30-59	53	37%	74	41%	127	39%
60+	21	15%	26	14%	47	15%
<b>Total</b>	<b>142</b>	<b>100%</b>	<b>182</b>	<b>100%</b>	<b>324</b>	<b>100%</b>

Just over half (51%) were discharged with no further treatment required while just over one-third (34%) were referred for follow-up treatment and 11% were admitted to hospital due to their injuries (Table 19). These figures were similar across both gender groups.

**Table 19: ED attendances for RTC injuries by gender and disposal method (South Lakeland residents), 2011/12 to 2013/14**

Disposal method	Female		Male		Total	
	n	%	n	%	n	%
Admitted	<15	<10%	<25	<15%	37	11%
Discharged	73	51%	91	50%	164	51%
Follow-up/referral	53	37%	57	31%	110	34%
Other	***	<5%	<15	<10%	13	4%
<b>Total</b>	<b>142</b>	<b>100%</b>	<b>182</b>	<b>100%</b>	<b>324</b>	<b>100%</b>

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## RELATED DOCUMENTS AND USEFUL WEBSITES

**Road Safety Annual Report 2014** (International Transport Forum, 2014)

This annual report provides an overview for road safety indicators in the 37 countries which are members of the International Traffic Safety Data and Analysis Group. The report outlines the data collection processes, describes the road safety strategies and targets in place and provides detailed safety data by road user, location and age, together with information on recent trends in speeding, drink-driving and other aspects of road user behaviour.

Available at: [IRTAD](http://www.irtad.info)

**Reported Road Casualties in Great Britain: Main Results 2013** (Department for Transport, 2014)

This statistical release presents information on injuries on public roads in Great Britain in 2013. Data were accessed from the STATS19 system which only includes incidents reported to the police.

Available at: [Reported road casualties in Great Britain: main results 2013 - Publications - GOV.UK](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/270442/Reported-road-casualties-in-Great-Britain-main-results-2013-Publications-2014-01-27.pdf)

**Strategic Framework for Road Safety** (Department for Transport, 2011)

This UK strategy document outlines the wide ranging road safety issues that need to be addressed in order to reduce RTC injuries. The document is presented in three main areas: allowing local councils to make their own decisions; improving education and training; and, penalising the minority of offenders who drive dangerously. A key element of the framework is to support the sharing of intelligence to support informed decision making at a local level and to encourage evidence based approaches to interventions.

Available at: [Strategic framework for road safety - Publications - GOV.UK](http://www.gov.uk/government/uploads/system/uploads/attachment_data/file/270442/Strategic-framework-for-road-safety-Publications-2011-01-27.pdf)

The UK Government's *Think!* campaign, run by the DfT, provides road safety resources for the public, schools and road safety professionals. Visit [THINK! road safety: Roadsafety](http://www.think-roadsafety.gov.uk) for more information.

General road safety advice and information is available through The Royal Society for the Prevention of Accidents at: [General Road Safety Advice and Information | Road Safety | RoSPA](http://www.rspa.co.uk).

A range of useful CRSP documents, including Cumbria's *Annual Road Safety Report 2013/14*, are available at: [Useful Documents - Cumbria Road Safety Partnership, Road Safety Cumbria, Drink Driving Cumbria, Cumbria Driver Safety](http://www.crsp.co.uk).

### **Trauma and Injury Intelligence Group** (Centre for Public Health)

An interactive map has been produced by TIIG to accompany this themed report. The data shows the number and crude rates per 100,000 population of RTC injury attendances to the EDs across Cumbria made by residents of the county between 2011/12 and 2013/14.

Available at: [Interactive Maps | Centre for Public Health](#)

Furthermore, data requests are available by emailing [TIIG](#) or visit the TIIG website for further information: [Trauma and Injury Intelligence Group | Centre for Public Health](#).

### **Public Health Outcomes Framework** (Public Health England)

PHE's data tool provides information on the indicators to measure the outcomes of the PHOF for England. The indicator *1.10 Killed and seriously injured casualties on England's roads* falls into the wider determinants of health domain and reports on the rate per 100,000 population using data sourced by the DfT.

Available at: [Public Health Outcomes Framework](#)

### **Road Accident Data** (UK Data Service)

This resource provides data collected by police via the STATS19 system on RTCs across Great Britain, including: coordinates of the location of the incident; severity of the incident; number of vehicles involved; number of casualties; date and time of the incident; road type; speed limit of the road; and light, weather and road surface conditions. Please note you need to register to be able to access the UK Data Service.

Available at: [UK Data Service Discover » Road Accident Data, 2012](#)

### **English Road Safety Comparison** (Department for Transport)

This website has been created as part of the *Strategic Framework for Road Safety*, and includes charts and data tables for a range of indicators which can be viewed nationally, by local highway authority (LHA) or by comparing across authorities. Furthermore, an interactive map is available allowing users to select the year of the incident, the severity of the casualty, age band and vehicle type.

Available at: [Road collisions – Department for Transport](#)

### **CrashMap**

CrashMap is an online mapping tool, developed by a team of RTC analysts and road safety professionals, which illustrates RTCs on the roads of Great Britain using data published by the DfT. Users can also purchase reports which contain more comprehensive data about particular crashes of interest.

Available at: [CrashMap - Public Access to Road Safety Data](#)

## GLOSSARY

CRSP	Cumbria Road Safety Partnership
DfT	Department for Transport
ED	Emergency department
KSI	Killed or seriously injured
LSOA	Lower Super Output Area
NWAS	North West Ambulance Service
RTC	Road Traffic Collision
PHE	Public Health England
PHOF	Public Health Outcomes Framework
TIIG	Trauma and Injury Intelligence Group

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## APPENDICES

### APPENDIX A

#### Crude rates of people killed and seriously injured (KSI) on England's roads per 100,000 resident population by local authority, 2011-13

Local authority	Number KSI	Crude rate per 100,000	95% confidence interval	
			Lower limit	Upper limit
Allerdale	140	49	41	57
Barrow-in-Furness	42	21	15	28
Carlisle	114	35	29	42
Copeland	74	35	28	44
Eden	142	90	76	106
South Lakeland	172	55	47	64
Cumbria	684	46	42	49
England	63,734	40	39	40

Source: Public Health Outcomes Framework, Public Health England.

### APPENDIX B

The Trauma and Injury Intelligence Group (TIIG) Injury Surveillance System warehouses data collected by the emergency departments (EDs) across the North West of England and the North West Ambulance Service (NWAS). For this report, the following data were extracted from the TIIG Injury Surveillance System:

- Road traffic collision injury attendances to the EDs across Cumbria<sup>P</sup> between April 2011 and March 2014;
- Ambulance call outs across Cumbria between April 2011 and March 2014, categorised by traffic/transportation accidents (sourced through NWAS).

Data were analysed to explore and report on the extent of road traffic collisions (RTCs) across Cumbria in 2011/12, 2012/13 and 2013/14. Figures do not relate to individuals, but to the number of attendances and the number of ambulance call outs; for example, an individual could present to an ED more than once during the three-year period but all attendances made by the individual have been included in the analyses.

Where figures have been presented for Cumbria residents only, this is based on the postcode of residency, where complete and correct. Crude rates were calculated for each local authority and Lower Super Output Area (LSOA) per 100,000 resident population across Cumbria (using Office for National Statistics mid-2012 population estimates). To identify where there were

<sup>P</sup> There are three hospitals in Cumbria which provide Accident and Emergency services: Cumberland Infirmary, Carlisle; Furness General Hospital, Barrow-in-Furness; and, West Cumberland Hospital, Whitehaven.

significant differences between areas, 95% confidence intervals (CIs)<sup>Q</sup> were calculated. A full list of the number, crude rate and CIs for each LSOA of residency are available upon request.

For all tables, numbers less than five have been suppressed (with \*\*\*) in line with patient confidentiality. If there is only one number less than five in a category then a second number has been suppressed to prevent back calculations from totals. Percentages may not add up to 100% due to rounding.

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<sup>Q</sup> Confidence intervals (CIs) are a range of values indicating the uncertainty there is around the estimation of a calculated rate; the wider the CI, the more uncertainty there is. CIs are normally calculated at a 95% confidence level, representing the range in which the true population value will lie 95 out of 100 times (Association of Public Health Observatories, 2008). .